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ABSTRACT

The overall objective of the project was to develop a model adaptable throughout Texas that would enable school districts to increase and maintain female enrollment in vocational programs that had traditionally been dominated by males. In meeting this overall objective, other secondary objectives also had to be met. These included providing information to all the female students at the demonstration school about the educational and career opportunities available to them through vocational education; recruiting females into traditionally male vocational classes; providing the necessary support services to these females enrolled in these courses; informing teachers, parents, and the community in general about the availability of good jobs; and improving the image of vocational education so that students, parents, and teachers would see it as a viable alternative to traditional academic courses. This report discusses the project under four major categories: Developing the Recruitment Model, Assessing and Changing Attitudes, Relationship with Industry and Unions, and Summary and Recommendations. The appendix includes a pre- and posttest for students, Survey for School Personnel, and Telephone Survey for Parents and Community. (HD)

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equal vocational education

final report of contracts 52350387 and 62350237
women in vocational education

prepared for the division of occupational research and development
texas education agency

by jane lerner, fredell bergstrom and joseph e. champagne

center for human resources
university of houston
houston, texas

1976

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BACKGROUND

One of the most consistent changes in the nature of the United States population during the twentieth century has been the increasing involvement of women in the paid work force.[1] In 1900, women made up about 20 percent of the work force, and by 1975 this figure had risen to nearly 40 percent. Today there are more than 36 million women in the work force. Half of all married women now work. There are more mothers of school aged children in the labor force than there are at home full time. Nearly one-third of all women with children under six are working. Thirteen percent of the families in this country are headed by women. Two-fifths of all adult women are either single, widowed, divorced or separated, and the Department of Labor reports that all these trends will continue.

Figures such as these would indicate that the question of whether or not women do or should work has been resolved. This is not entirely true, but certainly it is hard to cling to the view that women's place is still in the home. However, despite this increased labor force participation by women, two distinct occupational systems continue to exist--one determining the jobs and roles that are allocated to men and one determining the jobs and roles allocated to women. According to economist Mary Stevenson, unequal pay for equal work, though important, is only a small part of

the larger question of why women workers receive low wages. Following an extensive analysis of census data, she concluded that sex segregation in the labor market is the real problem underlying the low wages that women receive.[2]

Dr. Jack C. Willers, in his paper Issues Emerging from the Women's Rights Movement and Their Implications for Vocational-Technical and Career Education, points out that one of the roots of this dual occupational system can be traced to the educational system. He states that, "the educational establishment has itself for 2,500 years or more engaged preeminently in subjugating women, inadvertently if not deliberately, and subjugating their intellectual and economic roles to supposed male superiorities."[3]

Since 1963, numerous legislative and policy measures have been enacted which attempt to bring about changes in the sex discrimination of our dual occupational system. These measures cannot by themselves be successful, however, because they ignore the early socialization of males and females in our society. Studies demonstrate that sex role stereotyping is clearly incorporated into individual attitudes and expectations at a very early age, and schools are continuing to prepare boys and girls for adult work roles in a dual occupational system. The HEW Advisory Committee on the Rights and Responsibilities of Women points out the difference between the reality of women's actual experience in the labor market and the misperception of that reality which apparently underlies the approach of many U. S. schools to vocational education for women.

The reality is that more than 90 percent of all American women work for pay at least part of their lives. At any given time, about half of the female population is employed. Almost 40 percent of the total labor force is female. The social, personal, economic and educational factors which

influence women's decision on whether or not to work are changing in ways to encourage outside employment. The stigma once attached to working mothers has dissolved as more families have found two incomes necessary or desirable, and as women have chosen or been compelled to support themselves financially. Levels of education, which are the greatest single determinant of female employability, are rising. At the same time, girls and women tend to be enrolled in vocational education programs which either do not prepare them for gainful employment or which prepare them only for low paying, dead end jobs.[4]

Half of all U. S. women enrolled in vocational education are taking homemaking, most of which is not considered career preparation. An additional 30 percent are training for secretarial, clerical or other office occupations, and 14 percent more are in other traditionally female job categories. Only 4.8 percent are in the trade and industrial programs, which account for 46.9 percent of the male enrollments. Only 8 percent are being prepared to work in fields traditionally dominated by men--precisely the fields where women now have the most promising opportunities and thus should be preparing in greatest numbers. Janice Law Trecker reiterates this point when she writes, "In perhaps no other area of the curriculum is there more need for non-stereotyped information and for positive role models for young women than in vocational training and career education. Traditional stereotypes about the proper work for women have combined with overt economic discrimination to greatly restrict the aspirations and opportunities of the female secondary school student."[5]

A major consequence of this pattern of vocational training of women is that it perpetuates--at a time when the majority of women over age 18 are in the labor force, and more and more women are heads of households--a labor

market structure in which women are concentrated in occupations paying much lower wages than do the occupations in which men tend to be employed.

Project Baseline, in its report Women in Vocational Education, presents a breakdown of the enrollments in vocational education by sex for 1972. The table below presents some of the areas that are predominantly one sex, along with the average entry earnings for skilled workers in the related field.[6]

OE Title	Total	Male	Female	% Female	Average Entry Earnings for Skilled Workers
air conditioning	67,620	64,956	2,664	4.0	$5.12/hr.
appliance repair	17,472	16,965	507	3.0	4.87/hr.
auto mechanics	228,364	223,065	5,299	2.3	6.15/hr.
auto body and fender	57,284	56,202	1,082	0.9	6.52/hr.
carpentry	95,706	94,255	1,451	1.5	7.55/hr.
electricity	60,791	60,201	590	1.0	8.19/hr.
masonry	29,992	29,756	236	0.8	7.87/hr.
plumbing and pipefitting	37,311	37,277	34	0.1	8.15/hr.
other construction and maintenance	79,623	78,057	1,566	2.0	7.69/hr.
electrical occupations	81,493	80,584	909	1.1	5.04/hr.
metalworking occupations	291,662	288,581	3,081	1.0	4.21/hr.
refrigeration	11,198	10,384	814	7.3	6.25/hr.
child development	138,589	5,565	133,024	96.0	3.13/hr.*
clothing and textiles	364,659	7,163	357,496	98.0	2.61/hr.
cosmetology	48,810	2,940	45,870	94.0	3.75/hr.*
dental hygienist	4,754	170	4,584	96.4	4.28/hr.*
filing and office machines	398,226	70,772	327,454	82.2	2.40/hr.*
food and nutrition	222,552	30,747	191,805	86.2	3.60/hr.*
practical nurse	82,896	4,594	78,302	94.4	3.00/hr.*
steno/secretarial and related	550,686	21,823	528,863	96.0	3.16/hr.*
typing and related	628,414	127,897	500,517	79.6	2.73/hr.*

*Converted to an hourly wage based on 2,080 working hours per year.

This chart clearly shows that while schools are charged with preparing students realistically for their futures, they apparently are not preparing women for their current role, which includes employment. Schools should be acting to counter some of the socialization patterns which prevent girls from acquiring the job training that would do them the most good as adults.

Instead, schools are perpetuating it. Women seeking careers now and in the future face a different market, with many more opportunities, than their mothers faced. Most of their best opportunities will be in fields that have traditionally been considered male fields, for the fact is that women who work in fields that predominantly employ males are paid substantially more than are women who work in fields that predominantly employ women.[7]

Before one can encourage high school females to pursue training opportunities in the non-traditional skilled/craft areas, it is important to ascertain if there are job opportunities available for women in these areas. Janice N. Hedges and Stephen E. Bemis did an extensive study of the movement of women into the skilled trades for the Monthly Labor Review in May, 1974.[8]

For the nation as a whole, each decennial census from 1900 through 1960 showed women holding between two and three percent of all skilled jobs. Even during World War II, when women in defense industries achieved high visibility in traditionally male occupations, they filled no more than five percent of all skilled jobs. The absence of women in most skilled trades, ever after women had made inroads into other male domains, raised questions as to a lack of interest on the part of women. However, when occupational data by sex for 1970 became available, it showed increases in the employment of women in the skilled trades.

In 1973, 561,000 women were working in the skilled occupations, up from 277,000 in 1960 and 484,000 in 1970.[9] The rate of increase was twice that for women in all occupations and eight times the rate of increase for men in the skilled trades. By 1970, women held as high a proportion of the jobs in the skilled occupations as they had during World War II. Women registered gains during the 1960's almost across the board--in construction, mechanics and repair, and supervisory blue-collar occupations. Of roughly

80 trades listed in the census, most showed rates of increase for women that exceeded the rate of increase for men; some also exceeded the numerical increase. Even in many trades in which the employment of men remained stable or declined, the number of women increased. As late as 1960, women were such a tiny minority in nine trades that the census reported them filled entirely by men. A decade later, no trade was so dominated by men. By 1970, the probability of any employed women being in a skilled job was one out of 60.

The reasons for this movement of women into the skilled trades are many. Once the legal right of women to equal employment had been established, women were drawn to work that paid well. For those with a high school education, such jobs were most likely to be found in the skilled trades. In addition to higher pay scales, the trades offer other economic advantages: on the job training with pay, pay increases at regular intervals, paid vacations and holidays, sick leave, and workmen's compensation. Also, many find the work more satisfying than that offered in the occupations traditionally open to women. Jobs in the skilled trades generally present a striking contrast to the controlled and fragmented jobs of many factory and office workers. Many offer more independence and freedom, the chance to work out of doors, to work with one's hands. However, the prime factor in bringing women into the skilled trades was employer confidence in their ability to perform the jobs. Women had proven their abilities to function in skilled jobs during World War II. During the war, women captured the imagination of the public, and their work was compared favorably with that of men with equivalent training and experience. Today, many employers still remember the role played by women during that period.

Researchers have confirmed that social discrimination in educational programs and industrial hiring rather than aptitude has barred women from skilled jobs in the past. Extensive studies by the Human Engineering Laboratory of the Johnson O'Connor Research Foundation show that many women have the aptitudes to perform jobs that have been dominated by men. In fact, the research indicates that no significant sex differences exist in 14 of the aptitude and knowledge areas studied, and of the remaining areas, men excel in two and women in four.[10] The U. S. Employment Service has done studies into aptitudes of job applicants as related to occupational requirements. The GATB, the test used in this area to evaluate applicants for vocational education programs, yields assessments in nine areas. Seven of these areas are important to success in the skilled trades. Of these seven, two reveal no sex differences, women excelled in four, and men in one.[11]

Opportunities for women in the skilled/craft areas are expected to increase greatly in the next decade as the number of jobs expand. The Department of Labor is projecting an increase of 2.2 million jobs in the skilled trades for the period 1972-1985. This increase would bring the total employment to 13.0 million in 1985. With growth and replacement combined, job openings during the period are projected to total 5.3 million, or more than 400,000 per year.[12]

These expanding opportunities in the skilled/craft jobs are further emphasized by data on the projected increases in the labor force. This data shows that the areas where women are currently making the greatest headway are also the areas of least opportunity in the future. In her study, Vocational Preparation for Women, JoAnn Steiger presents this data by

occupational status groups for 1970 to 1980. The data are shown below:[13]

Occupational Status Group	Labor Force Increase (1)	Employment Increase (2)	Difference (1)-(2)
Group I, professional, technical, and kindred	45.3	39.0	6.3
Group II, managerial, clerical, and sales*	24.6	21.9	2.7
Group III, craft and kindred (part of)+	15.1	16.5	-1.4
Group IV, operatives (part of)Λ	11.0	16.9	-5.9
Group V, laborers (part of)▽	4.4	10.6	-6.2

*Also includes police, fire fighters, and related occupations. Does not include shipping and receiving clerks, messengers, and office helpers.

+Includes farmers; operatives in selected higher wage industries; e.g., transportation equipment, chemical, and petroleum; and barbers, bartenders, and practical nurses.

ΛIncludes auto mechanics; construction painters, plasterers, cement and concrete finishers, and roofers; selected service occupations; e.g., hospital attendants, waiters, guards, and housekeepers; metal-working industry laborers and shipping and receiving clerks, messengers, and office helpers.

▽Includes most farm and nonfarm laborers, cooks and kitchen workers, cleaning and building service workers, domestic workers, and laundry and dry cleaning operatives.

These data clearly show that women in the future must look to new areas for job expansion. While there will be a 39 percent increase in professional and technical jobs, there will be a growth of 45.3 percent in the number of people seeking these jobs. Likewise, there will be more people seeking managerial, clerical and sales jobs than there will be openings. However, the situation will be the reverse for craft workers.

Employment will increase 16.5 percent while the number of people seeking such jobs will increase 15.1 percent. Likewise, the openings for operatives will exceed the supply. Thus, people looking for jobs through 1985 should consider craft and industrial jobs, for that is where the openings will be in excess of supply. Not only will there be job openings in these areas, but these are areas of high pay. As has been stated before, women who work in predominantly male occupations earn more than women in occupations that are predominantly female. Most of the top paying jobs for women have fewer than 10 percent female workers.

Thus, the enforcement of laws mandating equal opportunity in employment and the heightened awareness among employers that women can successfully perform jobs previously restricted to men have led to a significant increase in opportunities for women to enter the non-traditional occupations. To be able to take advantage of these opportunities, a woman must acquire the appropriate marketable skills. While vocational education is the obvious route for women to use, current vocational programs are not adequately meeting this challenge. It is very difficult to expect employers to continue to expand their hiring of women for these kinds of jobs unless women are appropriately trained for them. Surely this training is the responsibility of our schools.

Congress has recognized the extent of sex stereotyping in educational programs and has outlawed many discriminatory practices through Title IX of the 1972 Education Amendments. Title IX states that, "No person.. shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any education program or activity receiving federal financial assistance." This legislation outlaws many practices resulting in the dualism that currently exists in

most vocational programs. Dr. Elizabeth J. Simpson, a past president of the American Vocational Association, has called upon vocational educators themselves to take the lead in finding and defining a new day in women's rights and responsibilities, rather than abdicating this responsibility and leaving the task to others who will then determine vocational education's place and responsibility.[14]

One might interpret the lack of female students in non-traditional vocational programs as indicating a lack of interest on the part of the females. However, researchers have shown that this is more an indication of lack of knowledge, both of their own future work life expectancy and the non-traditional opportunities available. In a study in which young women were asked if they would be employed at age 35, only 29 percent of the whites and 51 percent of the blacks said yes. The actual labor force participation rates for 35 year old women are 48 percent for whites and 67 percent for blacks.[15] Further research has found that junior high school girls tend to express preferences for occupations depicted by female models in an audiovisual presentation, when the substantive content of the occupations themselves is not a factor. Data suggest that girls will tend to aspire to careers only from within the narrow range of the sex stereotyped careers depicted by female models in the media, or to the domestic roles for which career models are plentiful in the media and in life.[16] This certainly supports the contention that the predominant use of male career models in textbooks and other media used for instruction and counseling can and have operated to limit the range of girls' vocational choices and aspirations. Certainly, this must be remedied if vocational education is to live up to the challenges of the future for women. Or, in the words of

Mary Ellen Verheyden-Hilliard, a member of the District of Columbia Advisory Council on Vocational Education and Consultant to the Secretary's Advisory Committee on the Rights and Responsibilities of Women, "the glass slipper of sex stereotyped education is far too fragile for tomorrow's world."[17]

Educators in the State of Texas have for some time been aware that girls in Texas were not receiving full benefit from vocational education programs. In 1973, the Advisory Council for Technical-Vocational Education in Texas recommended that technical-vocational programs at the secondary and post-secondary levels receive a special review and evaluation to determine if the special needs of many groups, including women, were being adequately served. This recommendation was accepted by the State Board of Education in 1974.[18] Personnel at the Division of Occupational Research and Development of the Texas Education Agency were also aware of the few girls enrolling in traditionally male technical and industrial vocational programs. They were concerned whether these small numbers represented a lack of interest by girls or whether they indicated discriminatory practices in recruitment. With their Part C research funds, the Agency sought to find an answer to this question. Texas was one of the first states in the nation to commit its own research monies to the problems of vocational education for women.

On February 1, 1975, after much consultation with the Agency, the Center for Human Resources of the University of Houston was funded by the Division of Occupational Research and Development to develop a model program for Texas schools to eliminate the effects of past discrimination in the technical and industrial vocational programs. The research project, officially known as Women In Vocational Education, was funded for 17 months, to run

through June 30, 1976. Staff on the project included Dr. Joseph E. Champagne, Associate Director of the Center for Human Resources, who served as Principal Investigator, and Jane Lerner and Fredell Bergstrom, who served as Project Co-Directors. Before funding of the project, arrangements were made for the project to work in cooperation with the Houston Independent School District Mr. J. B. Whiteley, then Deputy Superintendent for Occupational and Continuing Education, was the primary contact within the district. During the summer of 1975, Mr. Whiteley was named President of the Houston Community College, and he was replaced in the district by Mr. Billy McLendon.

The demonstration school selected for the development of project activities was Sam Houston High School. Sam Houston was chosen because it is a large, urban high school with both academic and vocational programs. Sam Houston also has a good representation of all three ethnic groups--66 percent Anglo, 14 percent Spanish surnamed and 20 percent Black. The traditionally male vocational courses taught at Sam Houston include auto mechanics, radio and television repair, air conditioning and refrigeration, metal trades and environmental technology (plumbing and heating and cooling). There were no girls in any of these classes, nor had any girls registered for them, when project activities began. The principal at Sam Houston High School is Mr. W. C. Hollingshead, and he agreed to work with the project before the proposal was submitted.

FOOTNOTES

[1]Shirley McCune, "Vocational Education: A Dual System," Inequality in Education, March, 1974, p. 28.

[2]Pamela Ann Roby, "Vocational Education and Women," University of California, Santa Cruz, p. 4.

[3]Jack C. Willers, "Issues Emerging from the Women's Rights Movement and Their Implications for Vocational-Technical and Career Education," The Illinois Teacher, March-April, 1973, p. 274.

[4]JoAnn M. Steiger and Sara Cooper, Vocational Preparation of Women, A Report of the Secretary's Advisory Committee on the Rights and Responsibilities of Women, July, 1975, p. 11.

[5]Roby, p. 16.

[6]Marilyn Steele, Women in Vocational Education, Project Baseline Supplemental Report, Northern Arizona University, Flagstaff, October, 1974, pp. 33-41 and 67-76.

[7]JoAnn M. Steiger, Vocational Preparation for Women: A Critical Analysis, Steiger, Fink & Smith, Inc., McLean, Virginia, December, 1974, p. 2.

[8]Janice Neipert Hedges and Stephen E. Bemis, "Sex Stereotyping: Its Decline in Skilled Trades," Monthly Labor Review, May, 1974, pp. 14-21.

[9]Mary L. Ellis, A Report to the Nation on Vocational Education, Project Baseline, Northern Arizona University, Flagstaff, November, 1975, p. 57.

[10]Roby, p. 5.

[11]Hedges and Bemis, p. 19.

[12]Hedges and Bemis, p. 21.

[13]Steiger, p. 12.

[14]Elizabeth J. Simpson, "Women's Lib is Here to Stay," American Vocational Journal, December, 1970, p. 18.

[15]JoAnn Steiger, Summary of Remarks before the Commonwealth of Massachusetts Advisory Council on Vocational-Technical Education, April 1, 1976, p. 2.

[16]Myrna Plost and Marvin J. Rosen, "Effect of Sex of Career Models on Occupational Preferences of Adolescents," AV Communication Review, Spring, 1974, pp. 41-50.

[17]Mary Ellen Verheyden-Hilliard, "Cinderella Doesn't Live Here Anymore," Womanpower, November, 1975, pp. 34-37.

[18]Focus on the Future, Sixth Annual Report of the Advisory Council for Technical-Vocational Education in Texas, October, 1975, p. 67.

OBJECTIVES

The overall objective of the project was to develop a model adaptable throughout Texas that would enable school districts to increase and maintain female enrollment in vocational programs that had traditionally been dominated by males. In meeting this overall objective, several secondary objectives also had to be met. These included providing information to all the female students at the demonstration school about the educational and career opportunities available to them through vocational education; recruiting females into traditionally male vocational classes; providing the necessary support services to these females enrolled in the traditionally male vocational courses; informing teachers, parents, and the community in general about the availability of good jobs for women in fields traditionally dominated by men and the ability of women to perform in these jobs; and improving the image of vocational education so that students, parents, and teachers would see it as a viable alternative to traditional academic courses.

In the original proposal, it was anticipated that the model developed would also include recruiting males into the traditionally female vocational areas. While it was recognized by all that this is an area that needs to be dealt with, the funding agency felt that this model would be too big to handle under this grant. The project staff now concur wholeheartedly with

this decision. The problem of recruiting males into traditionally female areas is a very different problem. It would have been a mistake to have tried to encompass both areas into one recruitment model.

DEVELOPING THE RECRUITMENT MODEL

Advisory Committee

One of the first activities after the project was funded was the establishment of an advisory committee to monitor project activities. The specific functions of the advisory committee were:

- to insure that the model developed could be replicated in other school districts throughout Texas and was not applicable only to the Houston area;
- to insure that the model would be acceptable to all segments of society--parents, educators, industry, etc; and
- to act as a sounding board for the project staff and suggest directions for the staff to pursue.

Project staff compiled a list of persons to be considered as possible members being sure to include representatives of counseling and vocational education from HISD and TEA, industry, unions, and the community. Persons were selected on the basis of their knowledge of and commitment to vocational education and/or equal education and employment for all persons. Letters explaining the goals and objectives of the project were sent to 12 persons along with an invitation to serve on the committee.

Eleven persons accepted the invitation. These included:

M. Diane Barber, Attorney, Pennzoil Company
Eve Bodner, National Board Member, Women's American ORT

James M. Cogdell, Assistant Director, Vocational Industrial Education, TEA
B. L. Ditto, Dean, Occupational Education and Technology, Houston Community College
Roberto S. Guerra, Coordinator of Migrant Affairs, Good Neighbor Commission
Maxine R. Hacke, Coordinator of Women's Programs, Gulf Oil Corporation
Oscar Millican, Education Program Director, Division of Occupational Research and Development, TEA
Letitia Plummer, Director of Guidance, HISD
Jack Stubbs, Training Director, Houston-Galveston Bricklayers Joint Apprenticeship Committee
Eleanor Tinsley, Former Member and President, HISD School Board
J. B. Whiteley, Deputy Superintendent for Occupational and Continuing Education, HISD; later appointed President, Houston Community College

When Mr. Whiteley was appointed President of the Community College, he was replaced in the school district by B. L. McLendon. Mr. McLendon was then added to the advisory committee, bringing total membership to 12.

The advisory committee met on a quarterly basis. The first meeting was May 1, 1975. At this meeting, the goals and objectives of the project were reviewed, and the model to be developed was discussed in detail. Accomplishments to date were highlighted by the staff as were future planned activities. Committee members offered much helpful direction concerning the planning and execution of a successful comprehensive media campaign. Industry representatives in particular offered concrete suggestions for involving other companies in the project as well as offering specific technical assistance, especially in the area of media coverage.

Due in large part to input by committee members, both the student and the parent surveys were revised. Information obtained from the revised surveys was valuable in planning the necessary activities to inform and recruit high school female students into traditionally male vocational programs.

The second advisory committee meeting was held August 28, 1975. At this meeting and at all others, project accomplishments to date were first

discussed and then planned activities for the next quarter were reviewed. At this meeting, specific accomplishments included student pre-testing; neighborhood pre-testing; meetings with Houston industry representatives; in-school activities for the 1975-75 school year; slide presentation; community presentations; teacher/counselor attitude survey; publicity; brochures; and student mail-out. Committee members expressed much concern over the lack of information that is disseminated to students. There was much discussion concerning the role of school counselors and their relationship with the students.

At this meeting, committee members were shown the project slide/tape presentation, All About EVE, which will be discussed later in the report. All present were extremely pleased with the presentation and felt it would be an extremely effective tool for informing young women about the traditional male vocational programs now available to them in high school. It was suggested that the presentation be shown to vocational educators throughout Texas as well as high ranking HISD officials.

Activities at Sam Houston High School, the designated demonstration school, and throughout the city were discussed. These included classroom presentations, parent presentations, and community organization presentations. The detailed publicity schedule was reviewed and approved for immediate implementation.

The third advisory committee in January, 1976, dealt in detail with the progress of the females at Sam Houston in traditionally male vocational classes and the information delivery system the project staff had developed. The publicity program was also reviewed. Several committee members offered assistance in the development of public service announcements.

Presentations outside of Sam Houston were discussed, and committee members made several concrete suggestions for different strategies to be

used with different target groups. Members felt that the program should be taken to other HISD high schools. As in the previous meetings, the advisory committee served as an excellent sounding board for the project staff--a clearinghouse for ideas and activities.

The fourth and final meeting of the advisory committee on June 10, 1976, concerned itself with an in-depth review of the results and conclusions of the entire 17-month project. The results of the student and teacher post-tests were discussed in detail. The advisory committee made several program suggestions when discussing possible future funding for the project.

Initial Recruitment and Monitoring of Girls at Sam Houston

Immediately after project funding, the staff decided that all its activities would be enhanced if it had an easily recognizable logo which could be used in all publicity, questionnaires, brochures, etc. The logo needed to be very catchy and appealing and also convey the objective of the project. The staff approached one of the art teachers at Sam Houston, and she agreed to make the development of the logo a project for her senior art class. After a very brief introduction to the project, eight of the students submitted logo designs. All were excellent, and it was very difficult to choose the best. The one chosen was designed by Jerry Salvaggio--a red apple formed from the letters EVE. To the side of the apple were the words "Equal Vocational Education." This logo was adopted immediately and has appeared on everything developed by the project. After the logo was adopted, the project became known as Project EVE, rather than by its official title, Women in Vocational Education.

In order to develop a model program, it was first necessary to immediately recruit some females into the traditionally male vocational courses at Sam Houston. In this way, project staff could work with the female

students and monitor their progress for the full school year while developing and testing materials and activities to be incorporated into the model.

In order to assure female enrollment in these particular programs, the staff organized a recruitment activity during the first week after project funding. The objective of the activity was to introduce all tenth grade students at Sam Houston to the opportunities available to them through vocational education. A secondary objective of the activity was to assess the general knowledge of these students about vocational programs.

Project staff developed a program for presentation to tenth graders through sophomore English classes. Initially, staff secured the necessary information on scheduling of sophomore English classes and vocational classes including class times and enrollment. This enabled the staff to prepare a preliminary schedule for presentations. Once the preliminary schedule was developed, staff met with the sophomore English teachers to elicit their support of the program and to find out if there were any serious scheduling problems. There were no problems, and the English teachers seemed very supportive of the project activity. Next, the staff met with the vocational teachers to get their support and assistance. They, too, were extremely supportive of the program and offered their help. Having the support of all faculty involved, the staff then met with the principal and vocational counselor to confirm the schedule of presentations. The schedule was confirmed immediately and promptly distributed to all faculty involved.

The tours of the vocational program took place February 18, 19, and 20, 1975. The presentations were made to 396 male and female students from 17 sophomore English classes. Each class spent one 80-minute period in the presentation. The presentation began with a brief introduction by the staff

person present, then a very short questionnaire to assess the students' knowledge of vocational education was administered. The staff member making the presentation then handed out and reviewed a pamphlet prepared by the project staff that gave an overview of all the vocational offerings at Sam Houston. Finally, the students were taken on a tour to see the vocational programs and facilities at Sam Houston. Since it was impossible for every student to visit every vocational classroom in one 80-minute period, students were escorted to six of the 17 vocational areas. The classrooms visited represented many of the different programs offered--from distributive education to welding, from plumbing to home economics. In each classroom, students were to be given a brief description of the particular course, the pay scales for jobs that open up as a result of the high school training, and an opportunity to ask questions. Following the tour to the vocational areas, students were escorted back to their English classes and given an opportunity to ask the project staff person additional questions and to fill in a form requesting more information about a particular program.

One hundred eleven students requested more information about some area of vocational education. All of the students were supplied additional information as requested. Sixteen females requested information about male-dominated technical and industrial programs. These girls were individually interviewed by the project co-directors during the homeroom period. The purpose of the interview was to answer any additional questions the students might have, to determine if these girls were in fact seriously considering job training for a career in one of these male-dominated programs, and to help enroll those girls who were seriously interested. Of the 16 girls, ten were actually interviewed. The other six girls were no longer interested. Of the ten who were interviewed, five decided to sign up for a male-dominated

course, four were more interested in some other vocational area, and one was no longer interested in any vocational program.

Tabulation of the survey administered to these 396 sophomore students indicated that most did have some knowledge of the vocational programs at Sam Houston. Generally, the female students were more familiar with the traditional female vocational courses, while the boys were more familiar with the traditional male courses. They did not usually know who the vocational counselor was, and most of them had not yet made career plans. The students knew the broad generalities of vocaticnal education but not the specifics such as how to find out more about a particular course or where the vocational area was located. This information gave the project staff concrete facts on which they could begin developing activities and materials.

The HISD fall quarter opened September 2, 1975. Project staff was at Sam Houston High School that day to make sure all five girls who had signed up for male-dominated courses as a result of the project activities to date were properly enrolled in their respective vocational programs. Unfortunately, only two of the girls were properly enrolled: one in plumbing and one in radio and television repair. The other three girls lacked the necessary paperwork to make them acceptable to the computer. Since the vocational counselor was new and burdened with requests for course changes, project staff offered their assistance in getting these students registered. After three days of completing registration forms and standing in lines, the other three girls were officially enrolled in non-traditional programs: two in auto mechanics, and one in plumbing. Another girl who had just transferred to Sam Houston was also enrolled in plumbing, making a total of six girls in the traditionally male vocational courses.

For the first four weeks of the fall quarter, project staff sat in on each of the four classes (auto mechanics, radio and tv, and two plumbing classes) at least twice a week. The vocational teachers had agreed to these classroom observations prior to the opening of school. It was felt by all involved that such regular visitations would help keep the project staff up to date on classroom activities for each girl and avoid some problems before they actually arose. These observations gave the staff an opportunity to develop a good working relationship with the teachers and both male and female students. After the first month, observations were less frequent--about once a week.

In addition to these classroom observations, the project staff held meetings for the girls every Tuesday morning from 7:30-8:00 a.m. in the school library. These meetings offered the girls an opportunity to share their experiences as the only females in their classes and to bring up any particular problems and/or successes they might be having. These meetings also offered the girls and the staff an opportunity to get to know each other well enough to talk openly and freely. The project staff also had regularly scheduled hours at Sam Houston, Tuesdays 7:30-10:00 a.m. and Thursdays 12:30-2:30 p.m., but it was not unusual for one of the girls to call one of the staff at her office or at home to discuss a problem or to arrange a meeting. This willingness of the girls to discuss problems with the project staff can be attributed to the relationship developed during these Tuesday morning meetings. Of the six girls enrolled in male-dominated vocational programs, four were always present at these morning meetings, and two did not choose to attend. Project staff did maintain contact with these two girls through the classroom visitations.

The project staff felt that it was very important to establish constant communications with those vocational teachers who taught the six girls. Initially, the staff met with these teachers once a week over coffee before school. However, this did not prove satisfactory, and project staff met with them individually during class, after class or whenever they were free to discuss the progress of the girls. The teachers realized early in the project that the staff was willing to help in any way possible, and as a result these teachers were very open and helpful. Small difficulties were worked out before they had time to mushroom, because the teachers were very anxious for the girls to assimilate into the program as quickly and as easily as possible. School administrators were consulted only when a matter of policy or security was involved, and this rarely involved the girls.

All project activities were first discussed with and approved by the principal. He then left it to the project staff to work out the details with the teachers and/or other Sam Houston personnel that would be involved. As far as the progress of the girls was concerned, the principal and several of the assistant principals were briefed about once a month by project staff.

The progress of the six girls was as varied as the girls themselves. The radio and television student was one of the top students in her class. An "A" student in all her academic courses, she was quite involved in the electronics she was learning and often tried to impart her knowledge of radio circuitry to the project staff. Of the two auto mechanics students, one proved to be an average student although she was less than average in several of her academic courses. The other female auto mechanics student did not make a passing grade the winter quarter and was not allowed to continue in the program. She was given no special privileges as one of two girls in an auto mechanics class. All students must drop out of a vocational

program if they fail a quarter, because they must make a passing grade every quarter to earn any credit. One of the three girls in plumbing transferred out of Sam Houston before the end of the winter quarter. Prior to transferring, she was doing fair work. The other two plumbing students completed their vocational course work with excellent grades. Both of these girls were extremely interested in plumbing as a career and as a result were at the top of their class. One of the girls was a senior and will begin working at a plumbing supply house this summer. She will be working in the parts department and is looking forward to being head of a plumbing warehouse some day. The other female plumbing student is a junior and will continue studying the plumbing trade her senior year. She, too, has a job at another plumbing supply house this summer and will continue working there her senior year through the Industrial Cooperative Training program. She will go to school for half a day and work half a day. She will be paid beginning wages for her work and will also earn credits toward her high school graduation.

Development of Information and Recruitment Model for Students

Before beginning development of the actual information and recruitment activities, the staff developed a comprehensive questionnaire to assess the female students' knowledge and attitudes about women in the labor force, women in non-traditional jobs, vocational education and their own plans for the future. The questionnaire was to serve a dual purpose. It would first serve as a way for the staff to find out more about the knowledge and attitudes of the girls that they would be working with. Many people had ideas about these girls, but no one, including the project staff, really knew exactly how they felt about the issues involved. Secondly, the questionnaire

was to serve as a method for evaluating the success of the project. By pre-testing before activities began and post-testing at the end of the project in both the demonstration school--Sam Houston--and a control school in which no special activities were to occur, the staff hoped to assess if the model developed really had made a significant impact on the girls.

Since most vocational programs at Sam Houston and other high schools begin in the student's junior year, the staff was preparing to spend most of its time with the girls in the sophomore class. Therefore, it was necessary to conduct the pre-test in the junior highs that would feed into the high schools. The staff hoped that by testing all the ninth grade girls in the feeder junior highs, they would be able to post-test enough of them in the senior high a year later to have a good sample for evaluation purposes.

Sam Houston had already been chosen as the demonstration school, and its three feeder junior highs were Patrick Henry, Fonville and Burbank. With the assistance of the HISD Research Department, Reagan High School was chosen as the control school. Reagan was chosen because it most closely resembled Sam Houston in ethnic make-up, economic level, and vocational course offerings. The feeder junior highs to Reagan were Hamilton, Hogg and George Washington. The HISD Occupational and Continuing Education Division contacted each principal and requested his cooperation with the project. All principals agreed to participate.

The survey was designed and pilot tested at Furr Junior High School by April 25. The pilot test indicated the need for several revisions in the wording of the questionnaire. After the revisions were made, the questionnaire was reviewed by the project advisory committee. The advisory committee made several more important suggestions for improving the survey. After

incorporating these suggestions, the survey was submitted to TEA for approval. The survey was approved with no further changes. (See Appendix A)

The questionnaire was administered to 824 ninth grade females in the six junior high schools in early May. The staff met with each principal individually before the testing to set the date and make the necessary arrangements. In every case, the principals were very cooperative and assisted the staff in every way possible. After the questionnaire was administered at Fonville, Burbank and Patrick Henry--the schools feeding into Sam Houston--the staff made a brief presentation on the project and the proposed activities at Sam Houston. The girls were specifically told to look for the project when they got to high school, and in fact many of them did.

The results of the pre-test did give the staff a good insight into the girls they would be working with at Sam Houston. Generally, most of the girls did agree that women should work and should have some means of earning an income. However, they were very traditional when choosing appropriate careers for women. They did not feel that carcers such as auto mechanics, plumbing, etc., were appropriate for women and agreed that girls perform best in jobs where they are working with people. On the subject of vocational training in high school, the girls very much agreed that girls should learn skills in high school and did not seem to have any negative feelings about vocational training in general. They did indicate that while girls were capable of training in the traditionally male areas, they did not think they should be encouraged to do so. They also did not choose non-traditional careers for themselves. The pre-test made it obvious to the staff that much needed to be done to introduce the girls to the non-traditional vocational programs and careers in skilled/craft areas. It was

also evident that the girls had very little information on the job market and had not really even thought about careers. Therefore, much of the work ahead would be just getting factual information to the students.

It was very obvious that the girls did not realize that there were already women trained for and employed in non-traditional skilled/craft jobs. In order to show these students that such women do exist, the project staff attempted to find a current short film that depicted women who were employed in traditionally male skilled/craft jobs. After reading many educational film catalogues, over 30 films were previewed. These films were previewed at the HISD Media Center and at the ESC Region IV Media Center and were ordered directly from film companies. None of the films proved adequate. The most non-traditional job held by a woman in these films was that of a doctor. Most of the films were made to encourage girls to plan for a future of work, but none suggested that they explore working in the skilled/craft areas. The only film found which even depicted women in these kinds of jobs was Never Underestimate the Power of a Woman,* developed by the Women in Wisconsin Apprenticeships Project. This 17-minute color film was directed primarily at industrial employers and was designed to show the suitability of women for work in a wide range of industrial jobs traditionally filled by men and to motivate attitudinal changes in employers to persuade them to open up to women those apprenticeship programs traditionally closed to them. The film is excellent and serves its purpose well.

*Available for purchase or rental from the Bureau of Audio-Visual Instruction, University of Wisconsin, 1327 University Avenue, Madison, Wisconsin 53706. Project reports entitled Women in Apprenticeship--Why Not? are available through the National Technical Information Service, Springfield, Virginia 22151, or the Employment and Training Administration, Department of Labor. A copy of the film is also available for loan within the State of Texas from the Texas Education Agency Resource Center, 201 East Eleventh Street, Austin, Texas 78701.

However, the women depicted in the film are generally middle-aged and not attractive role models for high school girls. The final report of the project suggests that a similar film be produced which would show younger, more attractive women in these jobs and could serve to motivate high school girls.

After spending countless hours reviewing these films and searching for others, the project staff decided that the only alternative was to make yet another film, one that would show young modern women working in non-traditional skilled/craft jobs. The project staff met with several different filmmakers to discuss this endeavor. It was soon realized that 16mm film was entirely too expensive. The project budget had not been developed with the costs of making a film or any other type of audio visual presentation in mind. The staff then explored the possibility of making a slide/tape presentation. This was much more economical and gave the staff a great deal of flexibility and control in the production. Originally, it was suggested that the staff write, photograph, and tape record their own slide/tape presentation. After several weeks of trying to be creative, the project staff enlisted the help of professionals. The decision was made early in the project that it was very important that everything associated with the project be packaged in an attractive manner. If avoidable, there would be no hastily mimeographed pamphlets, bulletin boards, programs, brochures, etc. Everything produced by the project would, whenever possible, be very professional looking in order to attract the students' attention and to improve the visual image of vocational education as much as possible.

Since the project staff felt that the slide presentation would be their single most important information and recruitment device, they decided, with the concurrence of TEA, that it would be well worth the necessary

funds. The money was made available by eliminating all paid publicity and relying entirely on news coverage and public service. The presentation was to be aimed at sophomore females and give them a more realistic view of their futures in the work force. The presentation was to include information on women in the labor force, women in non-traditional career areas and girls in non-traditional vocational education programs. After lengthy consultation, an advertising agency was hired to prepare the slide presentation for the project. The project staff began gathering materials and locating women already employed or training in non-traditional careers. This material was then turned over to the agency to incorporate into the slide presentation.

In order to include women employed and training in non-traditional jobs in the slide presentation, it was first necessary to identify those companies and training programs where women were already in these roles. Fortunately, the project staff had realized very early in the project that one of the key elements to its success would be the commitment and cooperation of area industry. Therefore, at the onset of the project, they had compiled a list of companies, representative of the major industries in the Houston/Gulf Coast area, and had begun meeting with them individually. As potential future employers of the girls, their understanding and acceptance of the project was vital. These meetings served as an opportunity to explain the project to the industry representatives and to elicit their support of project goals. Through these meetings, the project staff found many young women in non-traditional skilled/craft jobs in the Houston area. They may not, yet, make up a significant part of the labor force, but in raw numbers they do exist. The companies employing these women were most anxious for the project staff to meet them and take pictures, provided the employees approved.

The project staff, along with a professional photographer and a representative of the advertising agency, spent a week touring the various companies, talking with the employees and taking pictures. By the end of the week, nine companies and three construction sites had been toured and 62 female employees had been photographed in over 400 slides. In addition, four companies had their own public relations staffs take pictures for the project, and two branches of the armed forces sent pictures. Overall, the staff was very pleased with this venture. The slide presentation now depicts a good selection of women, of all different ages and races, in many different non-traditional skilled/craft jobs. The women interviewed reinforced everything one would imagine about these kinds of jobs--the good pay, working conditions, fringe benefits, etc. Many had a personal story that they wanted conveyed to girls in high school today.

In addition to the photography, it was also necessary for the audio portion of the presentation to be done. Once the script was written and approved, the agency then had the audio track, including the woman's voice and background music, recorded in a sound studio. The script was excellent as was the woman's voice. The original background music was not acceptable to the agency or the project staff so another taping session was held. This final version of the tape was excellent and met with everyone's approval. The next step was to put the slides and tape together to form the end product. Most of the equipment needed to run the presentation was available within the University of Houston--two carousel projectors and a stereo tape recorder. However, in order to maximize the effectiveness of the program, the Center for Human Resources contributed the funds necessary to purchase a Dynamic Programmable Dissolve. This delicate piece of audio visual equipment synchronizes the two projectors and tape recorder,

allowing many variations in the way the slides are shown. After programming, the presentation literally runs itself. The staff reprogrammed the presentation several times throughout the year before being entirely satisfied with the finished product.

The end product of these endeavors was a ten-minute presentation known as All About EVE.* All About EVE is specifically geared to the high school girl. It uses animation, historical pictures and actual photographs of women in non-traditional jobs, in non-traditional training programs, and in the home to introduce the girls to their future roles as both homemaker and worker. The presentation first shows why, historically, woman's place was in the home. It then shows how men and women moved from the farm to the city, and how women began to work outside of the home. With the entry of the U. S. into World War II, many women began to perform jobs previously considered only for men in the wartime industries. After the end of the war, the men returned to the factories, and most women returned to the home. The second half of this presentation shows many women who today are again working at jobs once off-limits to females. These women are enjoying their careers in non-traditional areas and are especially excited about the money they are earning--money that will enable their families to enjoy a more luxurious life.

Finally, the presentation explains job training that is available free to all high school girls. The vocational programs depicted have previously

*The major objection to this type of presentation is that it is not easily portable. While the staff was able to get it all over the city of Houston as necessary, everyone realized that it was not suitable for transport out of the city or for duplication. Therefore, after the presentation had been tested and revised many times, the staff began looking into ways to convert it into 16mm film. Contributions were solicited from local industry, and the response was gratifying. By the time this report is out, copies of the film should be available throughout the State, from the TEA Resource Center, or from the Center for Human Resources, University of Houston, Houston, Texas 77004, (713) 749-3755.

not been open to girls in most high schools. Different high school vocational programs are investigated including auto mechanics, machine shop, welding, radio and television repair, and air conditioning and refrigeration.

After viewing the slide presentation, the female students realize that they have many viable career opportunities with training for these careers available to them at their high school.

On August 28, 1975, the completed slide/tape presentation was shown to the project advisory committee. The members were extremely excited with the presentation and felt it would have a very positive effect upon anyone, adult or teenager, who saw it. The presentation has been used well over 100 times. Over 3,500 students, mostly female, have seen it as well as over 1,000 professional educators, parents, employers, and other members of the community. The vast majority have left the presentation with very positive feelings. Most who have seen All About EVE have agreed with the staff's evaluation that it does a good job of presenting non-traditional training and career opportunities for women in a very appealing manner. All About EVE was developed for the student, parent, employer, etc., who has never seen a woman working as a welder, plumber, carpenter, or mechanic and who still thinks that all women in these jobs look like Rosie the Riveter.

During the pre-testing at the feeder junior high schools to Sam Houston High School, all girls planning to attend Sam Houston were asked to fill out a card with their name, address, telephone number and age. These cards were then used to compile a mailing list of future female students at Sam Houston. In late August, 1975, the project staff mailed out a flier to all of these girls. The flier was printed on glossy paper and, when opened, showed four different sketches of women working at non-traditional jobs:

television repair, plumbing, electricity, and welding. In the upper left-hand corner was printed, "to find out more..." and in the lower right-hand corner was printed the EVE logo and "sam houston high school." The black and white sketches were the work of a professional artist and were very attractive. It was felt that by reminding the girls once again of the many training opportunities they may never before have considered and identifying them with the EVE logo, the project staff would reinforce their earlier contact with the girls. The mail-out was designed with the same idea as was everything else associated with Project EVE--the image is the message and the image of job training in high school needs a little rejuvenation. Many of the girls did in fact remember the EVE logo and the project staff when they saw them at Sam Houston. As a matter of fact, for some of the girls, the logo and the staff were the only familiar faces to be found. The positive image that was a part of EVE was extremely helpful. It was not considered a negative stigma to be seen talking to the EVE staff about anything from vocational education to the location of the nearest restroom. Many of the male students wanted to know why there wasn't any EVE program for them.

While the slide presentation was intended to serve as the main recruitment activity, the staff felt that it could be very effectively combined with other classroom activities for a complete self-contained recruitment program. The girls at Sam Houston High School had two persons acting as recruiters and reinforcing the place for girls in the non-traditional programs. However, other schools would not have the benefit of this much personal time. Initially it was thought that a counselor could act in this role in other schools. However, counselors today have so many duties other than personal contact with students that it would be unrealistic to expect

them to spend the amount of time on activities that the staff of this project was able to. The goal became to develop a self-contained classroom recruitment activity that could be used by counselors, teachers, or whomever else wanted to duplicate it.

In early discussions with administrators at Sam Houston, it was thought that the best idea was the development of a one-week mini-course to be used in the physical education classes. This course would have included not only the information on non-traditional jobs and vocational courses, but also much information on the world of work, the cost of living, etc. After much discussion, including discussion with the physical education teachers who would have been involved, this idea was dropped. It soon became obvious that most teachers would not be willing to give up a week out of the quarter for such an activity. Development of a program such as this would have severely limited the number of different teachers who could have used it. It was decided, therefore, to limit the activities developed to one class period in length.

After this decision was made, the project staff began developing an 80-minute program to be tested in the girls' physical education classes. Packing as much information as possible into an 80-minute presentation resulted in a very intensive and exciting program for the girls. The title of the presentation was What's In Your Futur... Will You Plan It Or Just Let It Happen? The overall message of the program was, "Nine out of ten of you are going to work for 20 years or more. If you are going to work for 20 years of your life, why not look at all of the varied opportunities available to you today, choose one with good opportunities and good pay, and get the necessary training free in high school."

A student booklet was developed containing five different exercises. Each was developed so that it could stand alone. However, they were designed to build on one another. The purpose of each exercise was to start the girls thinking of work, careers and vocational education.

The booklet begins with a game, "Does the Glass Slipper Fit?" The purpose of the game was to let the students find out if they are better prepared for the life of Cinderella in fairy land or the life of today's woman. The game was really intended to perk the student's interest in the upcoming activities and kick off the discussion.

The next activity was the showing of All About EVE. This activity was very much self-contained and discussion after it followed many routes--the history of women working, women in non-traditional jobs, women in vocational education, the role of women today, the need for job training, specific jobs, etc.

After the slide presentation, there are three case studies which were read to the students. The case studies were intended to allow much flexibility. There were many other situations that could have been depicted depending on the students involved--their economic status and their future plans. The cases used in the project depicted a couple where the wife was not prepared for any career and needed to work; a couple where both husband and wife had good skills and good jobs; and a girl who went to college but could not find a good job. The students were told to put themselves in the place of the characters in the cases, and much discussion always followed about what the girls did, why, and what they should have done.

Following the case studies, the student booklet contained several pages of information and data from the Women's Bureau of the Department of Labor describing women's current and future status in the labor force. This data

was summarized on a page entitled "What Is Your Future Work Life Expectancy?" This page described the "average" girl today and what she could expect in her future--leaving school, working, marriage and family, etc. The girls were told to put themselves in the place of this "average" girl.

Students were then given a brochure which described vocational offerings in high school and had a space for requesting more information about a particular area. This was followed with much discussion about specific career areas and the training necessary for them.

December 4th and 5th were the days selected by the physical education teachers for the project staff to make their presentation to the sophomore classes. The staff and teachers were able to establish a good working relationship before the actual presentations, and the teachers were very helpful and cooperative. On the assigned days, the project staff assumed the role of teacher in all of the female sophomore physical education classes at Sam Houston High School. The program was presented to 228 girls in those two days. Seven different classes spent one 80-minute period going through the student handbook, What's In Your Future...Will You Plan It Or Just Let It Happen? Each student was given a copy of the handbook. Being familiar with and forewarned of the reading ability of many students, the project staff generally read the material to the girls. At the end of each class period, the students were asked to complete a written evaluation of the materials.

Overall, the response to the classroom materials was extremely positive. The evaluation confirmed that the materials had achieved the two goals set out--the girls absorbed the information presented and enjoyed the experience. Their responses to the questions on the form were exactly what the staff hoped for. They really seemed to understand that they did need to

prepare for a career, just like most boys do, and that there are many opportunities available to them in non-traditional areas. The only part of the presentation that did not seem to go over as well as hoped for involved the labor force data. The girls were very interested when discussing something that they could relate to themselves personally, but were not interested in general data about women. The data will be left as resource materials for teachers as they answer many questions, but they were not used again directly with the students. The game was shortened somewhat, just to make it easier to present. Other than that, the materials were left intact, since they seemed to meet the objectives set out for them. Based on the responses to this survey, it was decided that the materials should be tried out in some male/female classes. The responses to those presentations confirmed what these girls said about boys also needing and wanting this information. The specific questions asked on the evaluation form included:

Which part did you enjoy the most?
Which part did you enjoy the least?
From which part did you learn the most?
From which part did you learn the least?
Was any part of the class period boring? Which part?
Has this class period been worthwhile to you? Why?
Should all girls spend a class period on these materials? Why?
Do boys need to know more about these kinds of jobs for girls? Why?
What did you learn today?
Did today's class make you think of anything you hadn't thought of before? What?

The evaluation form was developed to elicit both the girl's enjoyment of the class presentation and what knowledge they gained from it. The staff intended for these materials to be presented in a way that would make them both entertaining and informational, so the survey was designed to evaluate both.

Over half of the respondents indicated that they most enjoyed the case studies. These were followed by the slide presentation and the game. Nearly one-third said that the least enjoyable parts of the class period were the data from the Women's Bureau followed by the discussion of future work life expectancy. While less than one-fourth of the students found any of the period boring, those who did generally cited the data presentation as the boring part.

When asked about the section where they learned the most, the first response was the same--the case studies. This was followed by the slide presentation and the discussion of work life expectancy. The game did not rate very high as a learning experience, but that was not its intent.

When asked to evaluate the entire class period, "Has this class period been worthwhile to you?" the responses were overwhelmingly positive (over 90 percent). The reasons given for this response included:

Made me think about what I want to do.

Made me aware of different careers.

Made me aware of opportunities for women in vocational education.

Now I know that a woman can get a job almost anywhere.

Made me see that the time to make decisions is now.

I realize I'd better plan to work after marriage.

I never realized how important job training and job skills are.

Because I realize that I've only got three years to decide how the rest of my life could go.

Made me more aware of what the real world is like.

Made me realize that a woman must have some form of job skills in case she ends up supporting herself or family.

On the next question, "Should all girls spend a class period on these materials?" over 85 percent responded yes. These reasons included:

Make them stop and think.

They need it.

So they won't go through life believing woman's place is in the home.

Everyone should know that times have changed, and women aren't as fragile as once thought.

Help them realize they should prepare for their futures.

So they can understand how important job training is.

The question "Do boys need to know more about these kinds of jobs for girls?" elicited very interesting responses from the girls. Two-thirds responded "yes." Their reasons were very good and indicated much thought about the subject. These included:

Their wives will work.

Let them know women are breadwinners, too.

To show them what women can do.

To understand women better.

So they will know we have just as much right to a job as they have.

They need to understand that it takes more than one person to support a family.

It will be easier for the woman who works with only men.

So they will understand why women need to work.

Most of the girls did respond to the question "What did you learn today?" Their responses included:

That I will work for 20 years.

I need to start planning my future now.

The importance of job training and a skill.

All about new careers for women.

Women have the same job opportunities as men.

Women need to work.

I've got a chance to do anything.

Not to listen to my boyfriend.

Working is better than loafing if you want to get anywhere in this world.

Nearly two-thirds of the girls responding said that the presentation had made them think of things they hadn't thought of before. The things listed included:

A woman's career is important.
To hurry and go to the counselor to get the training I need.
About my future.
About non-traditional career areas.
Training is important.
Women can do the same jobs men can do.
Why a girl should work after marriage.
Getting a good paying job.
If I try hard enough, I can do anything.
That I would enjoy outside work more than office work.
Find out about job opportunities before getting training.
There are many women interested in the same areas I am.

After the presentations, 53 girls immediately requested more information about a particular area--half of these were interested in a traditionally male vocational program. Twenty-three of the girls were sent additional information about general careers, magnet schools, etc. Nine of the girls requested information about Vocational Office Education (VOE), Industrial Cooperative Training (ICT), and Cosmetology, and their names were given to the appropriate teacher. The remaining 21 were interested in one of the traditionally male vocational programs. In early January, each of these girls was sent a permit through her homeroom teacher that allowed her to come to the library for an interview with the project staff. All but three of the girls came for the interview: one had transferred to another school, and two were no longer interested. The girls interviewed were interested in the following areas (some duplicates):

auto mechanics - 14
radio and tv repair - 2
metal trades - 7
plumbing - 1

All of the girls were taken out to the vocational classroom to meet the teacher and, when possible, the female student. The teachers described the

course work and answered the girls' questions concerning the programs. These prospective students were very serious about the training and impressed the project staff and the vocational teachers very favorably. The female students already enrolled in the vocational programs were also helpful to these girls, answering their questions and sharing some of their experiences as the only girl in a particular class. After these interviews, further recruitment was handled by the teachers. The teachers were each given a list of girls still interested in their classes. These lists included: three for radio and tv; six for auto mechanics; two for metal trades; two for plumbing; and two for air conditioning.

The project staff followed up several times with the teachers and counselors to assure that the girls were getting registered properly. While the registration process was somewhat difficult, everyone was satisfied that the girls were treated the same as everyone else.

By the end of the registration period, female enrollment in the first-year vocational classes at Sam Houston for 1976-77 was:

auto mechanics - 4
air conditioning - 2
metals - 4
radio and tv - 2
plumbing - 1

In addition, there will be two girls in the second years of radio and tv and plumbing (ICT).

The staff was very pleased with these numbers for several reasons. This is more than double the number of enrollees for last year. It also represents some girls in <u>every</u> traditionally male area at Sam Houston, two of which had no females last year. Several of the teachers have commented that, in many cases, these girls are better qualified than the majority of the boys. Because much advance thought went into the decision to take one

of the classes, these girls should turn out to be very good students. Supposedly, in order to get into a vocational class, a student must be planning to make a career of the particular area he or she is studying. However, it appears that many of the boys in these areas are not thinking "career" at all. They are thinking hobby or after school job. On the other hand, the girls recruited this year really are thinking "career," and their progress in the class should reflect this.

There was one other vocational education recruitment activity which took place at Sam Houston during the year. While it probably did not have any direct effect of the number of girls recruited this year, it would have potential for the future. Further, it gave the staff the opportunity to show the vocational department how to conduct a recruitment program that would make it clear that students of both sexes are welcome in every course.

As National Vocational Education Week approached in early February, the vocational teachers at Sam Houston met with the principal to discuss what, if anything, they were going to do to celebrate this event. At this first meeting, those present decided to have a career fair designed to recruit students into all vocational education courses. After the initial meeting, the project staff was asked to attend further meetings to help organize the activity. The staff also agreed to develop a brochure explaining all vocational programs at Sam Houston, provide the materials to make banners that would identify each vocational program, publicize the upcoming event, and assist the classes in developing appropriate door prizes. The fair was to take place in the main cafeteria Tuesday, February 17, and each vocational program was to have a booth in the area. Each program was identified by a large painted banner prepared by the vocational metals class, and the teachers were encouraged to involve their students in the Career Fair--to

operate displays, answer questions, pass out brochures, handle the drawings for door prizes, and generally be the sponsors of the fair.

A schedule was developed and approved that allowed each tenth grade English class to visit the Career Fair for at least 25 minutes. Once the schedule was approved by the administration, it was distributed to all teachers involved with a cover letter explaining the activity. The day before the Career Fair, invitations and brochures were sent to each teacher. The project staff felt it was very important to inform the entire faculty, not just the vocational teachers, of the Career Fair--the better informed, the more involved, the greater the chances for a positive image of vocational education among the entire staff at Sam Houston.

An invitation to the Career Fair was also issued to the entire student body via the two large bulletin boards in the main hall and a display in the library window case. The bulletin boards were real eye-catchers: red vinyl backgrounds with huge graphic tools on one four foot by six foot board and "to find out more...tuesday, february 17th, main cafeteria" printed on the other board in large black graphic letters. The bulletin boards were put up two weeks prior to the Career Fair in order to arouse student and faculty interest. The display in the library window case was made up of nine original black and white sketches of women at work in non-traditional jobs, several books on women in the labor force, and several reference books such as the Occupational Outlook Handbook. Both the window display and the bulletin boards proved very effective. They aroused much school interest, and many teachers as well as students asked administrators, project staff, vocational teachers, etc., about the upcoming event. Once again, by making the message attractive, the staff was able to present a very positive image of vocational education: both students and faculty were anxiously awaiting February 17th.

As mentioned earlier, each vocational program offered a door prize. The door prizes were goods or services that students made or studied in their particular vocational program. For instance, the metals program offered a Bar-B-Q pit that the students made in class, the auto mechanics students offered several tune-ups and lube jobs as door prizes, the distributive education class gave away a gift certificate to their store, the VOE class volunteered to type a term paper or a test, a sewer pipe planter was the prize of the plumbing students, while a free hair cut was the prize of the cosmetology students. There were many other door prizes, one per vocational program, and most were very clever. At the close of the day, each class had a drawing to determine the winner of the particular prize. The names of the winners along with the prize they won were announced the next morning during homeroom. Several teachers won prizes along with the students.

The feedback from faculty, administrators and students was very positive. Several administrators from the central administration building attended the Career Fair, and they, too, were quite pleased. Pictures of all the booths in operation were taken by the project staff and distributed to the appropriate classes. All of the pictures found their way to prominent places within the classroom.

Much of the material displayed in the library window case prior to the Career Fair was material already on hand in the Sam Houston library. Early in the project, the staff developed a very good working relationship with the library staff. As the project staff met with the girls in the library every Tuesday morning before school, such a relationship was quite appropriate. The librarians became quite interested in EVE and supported it totally. Together with the librarians, the project staff reviewed catalogues

of books, films, and other educational materials that were received by the librarians at Sam Houston. These were reviewed to determine if there were any recent materials, books or films available that concerned themselves with the role of women in the labor force and, if so, to order the materials for previewing. Most of the materials were not suitable and were sent back.

The project staff recommended to the librarians that several books should be kept on hand so that students could investigate career opportunities in whatever field was of interest to them. It was also suggested that the library might benefit from career information distributed free by the Department of Labor and the Women's Bureau in particular. By having the library placed on these mailing lists, it would be assured of constant and current information concerning the labor market and women in the labor market in particular. By keeping this information up to date and readily available to students, the library would be offering the students a very accurate and inexpensive source of valuable information. The library also received a copy of the EVE materials used in the sophomore physical education classes. It is very important that, if nowhere else, at least students should be able to receive accurate information about their futures in the library that is most readily accessible to them--their school library.

Presentations in Other HISD High Schools

After the development and testing of the classroom presentation, the advisory committee suggested that the materials should be shown to all of the Area Superintendents in HISD. The consensus was that the superintendents might want the materials introduced into their schools this year. Both HISD and TEA officials concurred with this suggestion. The presentation was shown to all the Area Superintendents at one of their regularly

scheduled meetings. The reaction was very favorable, and all agreed that the materials would be of benefit to their high schools.

Time and staffing limitations prevented the staff from going into every high school in HISD, so ten with large vocational programs were chosen. The staff also tried to pick at least one school in every HISD area. The staff then contacted the Area Superintendents individually to request permission to contact the schools chosen. Permission was received to contact nine of the schools. One of the schools chosen was already overloaded with special programs this year, and the Area Superintendent did not feel that any more could be handled. The schools contacted, by HISD area, included:

Area I - Waltrip

Area III - Austin
Bellaire

Area IV - Jones
Worthing

Area V - Milby
Wheatley

Area VI - Davis
Kashmere
(Also, Sam Houston)

At each school, initial contact was made with the principal, and then a meeting was held with the principal or whomever he designated. The contact person at the schools varied. Often it was the principal and vocational counselor. At several schools the staff worked with the academic counselors and girls' physical education teachers. Whenever possible, the staff included the vocational counselor since that would be the person most likely to be directly involved in the results of any EVE presentation.

The nine high school presentations were made during February and March. The general format and number of students at each school follows:

Jones	-	183 girls in sophomore PE classes
Worthing	-	287 sophomore, junior and senior girls in PE classes
Austin	-	123 sophomore girls in PE classes
Bellaire	-	183 sophomore girls in PE plus all female vocational students
Davis	-	350 sophomore and junior girls in an auditorium program
Kashmere	-	546 sophomore and junior girls in an auditorium program
Milby	-	202 sophomore and junior girls in PE classes
Waltrip	-	336 sophomore and junior girls in PE classes
Wheatley	-	50 girls in sophomore PE classes
TOTAL		2,260 girls

The programs at seven of the schools followed the format originally developed by the staff. The materials in the booklet What's In Your Future...Will You Plan It Or Just Let It Happen? and the slide presentation All About EVE were presented to small groups of girls. These presentations were very successful. In each instance, PE was used because this was the best way to reach the largest number of the girls in a school without disrupting the entire schedule. It also provided a small, all-female group. The obvious advantage of the small group was that it allowed much discussion, and all the girls became involved.

The staff realized, however, that not all schools would be able to incorporate these materials into PE classes, so auditorium programs were tried out--the type that most vocational counselors would be able to conduct. One of these programs was very successful; the other was less successful because of the poor physical facilities. The auditorium programs were organized using a variety of speakers: female students enrolled in non-traditional vocational programs at Sam Houston, women employed in non-traditional jobs, union apprenticeship recruiters, project staff, and vocational counselors. All About EVE was also shown, though it was not as effective in a large auditorium as in a classroom.

Following every high school presentation, brochures were distributed, and students were given an opportunity to ask questions of those making the presentation. If possible, the vocational counselor was introduced to the girls, and her/his duties were explained. The girls were asked to complete the form on the back of the brochure and turn it in to either the project staff or the vocational counselor if they wanted more information about a particular vocational program.

The actual success of these presentations was evaluated on the basis of the number of girls enrolling in a traditionally male vocational program for the 1976-77 school year as compared to female enrollment figures in those same courses for the 1975-76 school year. These data were obtained through the vocational counselor and, where necessary, the individual vocational teacher. While definite enrollment figures will not be known until after school begins in the fall, most schools do make up a list of students who apply for and are found qualified for the various vocational classes. The following list represents the counselors' best estimates for next year plus their female enrollment this year:

	Enrollment 1975-76	Projections 1976-77
Austin	1	3
Bellaire	0	2
Davis	4	16
Jones	3	5
Kashmere	13	17
Milby	3	3
Waltrip	0	5
Wheatley	4	14
Worthing	5	7

These schools had a total of 33 girls in these programs last year. This number will rise to approximately 72 next year. In each case the counselor definitely felt that the Project EVE presentation made to the students had had an effect on these increased numbers.

It is interesting to note that the control school, Reagan, which was kept isolated from any direct contact with project activities, had no girls in these programs last year and has no projected female enrollments for next year.

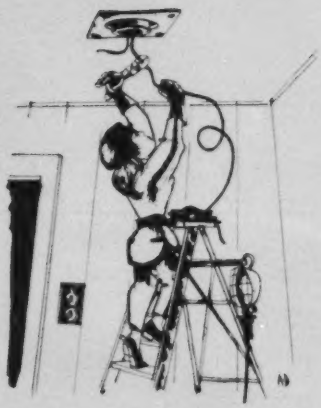
Junior High School Presentations

Even though the materials were developed with sophomore girls in mind, the staff was very anxious to try them out on junior high school students. Also, the HISD Deputy Superintendent for Occupational Education recommended that the materials be tried with groups of both boys and girls, specifically in the Occupational Orientation classes.

The three junior high schools contacted were Burbank, Patrick Henry and Fonville--the three feeder schools to Sam Houston. At the junior high schools, staff worked with career orientation teachers and girls' physical education teachers, as well as several English teachers. The types of programs were as varied as the persons contacted.

At Burbank, presentations were made to 105 males and females in ninth grade English classes. At Patrick Henry, the staff spoke to 102 students including boys and girls from the Occupational Orientation classes and girls from an English class. Most were seventh graders. At Fonville, the staff met with 101 ninth grade girls in PE class and later made the presentation to 90 seventh and eighth grade boys and girls in the Occupational Orientation class. All of the junior high presentations were very successful. The material seemed as suited to this age group as to high school students. In many ways, the junior high students seemed to enjoy the presentations more. The staff was extremely pleased to find that, with only minor changes, the material was as usable with a mixed class of 25 seventh graders as it was with a group of 500 female high school students.

When working with classes of both boys and girls, the introductory game "Does the Glass Slipper Fit?" was not used. The rest of the presentation remained the same. With each activity, it was easy to include the boys, and there was much very lively discussion between the boys and the girls in the classes. Much of the discussion, of course, revolved around which careers are suitable for women and which are not. All the students seemed to benefit from the information about vocational education; most did not seem to be aware of the opportunities available to them in high school.



ASSESSING AND CHANGING ATTITUDES

One objective of the project was to make the image of women in non-traditional skilled/craft jobs and vocational programs acceptable to students, faculty, parents and the community in general. The major means to carry this out was a community-wide publicity campaign. Without publicity, it would have been almost impossible to alter these attitudes. To introduce the project to the community, a press conference was organized. The purpose of this press conference was to kick off the idea of young women in non-traditional vocational education programs in high schools. One week prior to the conference, letters were sent out to seven newspapers and wire services, 24 radio stations, and six television stations. The letters very briefly explained the project and invited the addressee to attend the press conference and meet the girls already enrolled in non-traditional vocational programs at Sam Houston. The project staff also cleared the event with the HISD Information Office to insure that the district was fully informed of the project and could direct requests for further information to the project staff.

The press conference was held September 26, 1975 in a vocational classroom (Radio and Television Repair) at Sam Houston High School. Fifteen members of the media including television, radio and newspaper representatives attended the press conference. Those in attendance represented the three

major television stations, four radio stations, two newspapers, and one wire service. All of the television and newspaper representatives were accompanied by a photographer. The project staff hosted the conference and introduced the school principal. In turn, the principal explained the project and introduced the girls who were participating. News releases were distributed and those in attendance were given an opportunity to interview the girls, administrators, project staff, teachers, and tour the vocational facilities to see the girls at work. The coverage was excellent. EVE was featured on all three of the major television networks as well as in the Forward Times and the Houston Chronicle. All of the radio stations present recorded an interview with at least one of the above mentioned persons and aired it within two days. The project staff received many calls from the Houston area as a result of the publicity. People called requesting more information about job training, career opportunities, and simply to tell them that the project was certainly timely.

As a result of the press conference, the project staff was able to establish contact with enough persons connected with the mass media that continuous publicity was nearly certain. Thank you letters were sent to all who attended the press conference, and news releases were sent to those who were not able to attend. Throughout the project, when appropriate, the project staff contacted members of the press, radio, and television to keep them abreast of the progress of EVE. The project staff taped interviews for four separate radio shows, appeared on a television news show, and appeared with four of the girls on a Sunday morning television program aimed at contemporary issues. The project was featured in the Houston Post.

The tremendous amount of media coverage that the project received generated many requests for additional information concerning EVE, personal meetings, and when possible, EVE presentations. Presentations within HISD secondary schools were the primary concern of the staff, but whenever possible, they made presentations to other groups of people.

In order to continue the publicity campaign, project staff developed several public service announcements (PSAs) to be used on television. A cooperating company contributed the necessary artwork, and permission was obtained from several companies and their female employees to use their pictures in the PSAs. Most of the pictures were taken from All About EVE. All of the companies and employees were very cooperative and anxious to know exactly when they would be on television. The slides, art work, and written script were then turned over to the Community Relations Director of one of the local television stations. She made the audio portion of the PSAs and put them on tape which was distributed to all the other stations. Two announcements were made--one 15 seconds long and one 5 seconds long. The message of both was that vocational training in previously all-male fields is now open to women. Listeners were given a number to call for more information. This telephone number was answered at the Region IV Education Service Center where callers were asked to leave their names, addresses, and telephone numbers. This information was then relayed to the project staff for follow up.

The PSAs began appearing on all five of Houston's television stations in February and continued through May. The timing of the airing was set so that they would begin at the same time students began reviewing their courses for the 1976-77 school year and continue through spring registration.

As a result of the PSAs, Project EVE became very well known. Students in the schools where presentations were made knew of the project, and some were familiar with the specific objectives. Project staff followed up on many of the calls. Most were from women beyond high school age, and these women were referred to the Houston Community College where similar training is offered. Those callers who were still in high school were sent the brochure explaining vocational training in high school and encouraged to talk with their counselors.

Besides the community-wide publicity, specific activities were developed to reach Sam Houston students, faculty, parents and the immediate community. Surveys were developed to evaluate the effectiveness of the activities with the students and faculty.

Student Attitudes

All activities conducted at Sam Houston and throughout the community were directly or indirectly intended to change female student attitudes toward women in non-traditional careers and vocational programs. The effectiveness of these activities was evaluated by analyzing the pre- and post-tests given to the girls at Sam Houston High School and the control school, Reagan. The survey was repeated at the two high schools in the spring. By matching the names on the pre- and post-tests at each high school, the experimental group contained 254 girls and the control group contained 130 girls. After the results of the pre- and post-tests for the experimental and control groups were tallied, they were analyzed for significant differences between the pre- and post-tests for each group.

Most of the questions on the survey did not show any significant change between the pre- and post-tests for either group. Most of these were the

questions that dealt with attitudes toward working in general, attitudes toward women's role, attitudes toward vocational education, etc. However, on the questions dealing specifically with the material that was covered in the activities at Sam Houston, there was a significant change in the post-test responses. These were questions dealing specifically with girls in non-traditional vocational education and women in skilled/craft jobs.

There were four questions dealing specifically with girls in non-traditional vocational education classes in high school. These were:

> Question 17--"Girls should be encouraged to enroll in traditionally all-male vocational courses like air conditioning repair."
>
> Question 30--"Most girls would laugh at a girl who enrolled in plumbing."
>
> Question 44--"In high school, all job training courses are open to girls."
>
> Question 55--"In high school, a girl can learn to be an auto mechanic."

On each of these questions, the girls at Sam Houston showed a significant change in response from the pre-test to the post-test. On questions 17, 44 and 55 this change was in the direction of agreement. On question 30, it was in the direction of disagreement. At the same time, the girls at Reagan showed no significant change in response to any of these questions.

Two of the questions dealt with opportunities for women in non-traditional jobs:

> Question 7--"When planning for a career, a girl should consider technical and skilled jobs that have traditionally been for men only."
>
> Question 43--"Today there are many job openings for women in skilled jobs such as plumbing and welding."

On both of these questions the girls at Sam Houston showed significantly greater agreement in the post-test than in the pre-test, and the girls at Reagan showed no significant change in their responses.

One of the most interesting results of the questionnaire appeared on question 25--"If I had to make a choice, I would choose a job that made me feel important rather than a job with a high salary." On this question, the girls at Sam Houston showed a significant change in their responses. This change was in the direction of disagreement with the item. In other words, these girls now feel that salary is more important. At the same time, the girls at Reagan also showed a significant change in their response, but in the other direction--toward disagreement. They now seem to feel that status is more important. While some might see negative social implications in the girls at Sam Houston placing this much emphasis on salary, it in fact was a positive response as it indicated realization by the girls that they must be able to earn a living.

There were two factual questions on the survey dealing with women in the labor market that showed a significant change in response by the girls at Sam Houston. These were:

> Question 45--"The average woman worker today is single and under 20."
>
> Question 48--"More than one-third of all women workers are in clerical jobs like secretary, typist, etc."

In both cases the post-test responses were more incorrect than the pre-test. There was more agreement with question 45 and more disagreement with question 48. While the girls now seem to have a misconception of the realities of woman's place in the labor force, this can be explained if one thinks back on the presentation made to them. Two of the biggest points made were

that everyone of the girls would go to work soon after she graduated from high school and must be prepared for it, and that there are many job opportunities for girls other than clerical. In fact, the girls were never shown a picture of a female in a clerical job. Obviously, the girls were affected by these points, but generalized them beyond what they should have. Again, there was no significant change in the responses to these questions at Reagan.

It was also interesting to look at several questions on the survey where there was a significant change in the responses at Reagan and not at Sam Houston. These included:

Question 38--"Most women work because they need the money to help support their families."

Question 50--"A woman can have a career while raising a family."

Question 56--"Physically, women are capable of working as machinists."

Question 57--"Women can perform any job men can perform."

On each of these questions, the responses from Reagan showed significantly more disagreement in the post-test than in the pre-test, while the girls at Sam Houston showed no change.

Overall, the analysis of the pre- and post-test results showed that the project succeeded in making the girls at Sam Houston more aware of their opportunities in non-traditional vocational education and in skilled/craft jobs. They also indicated more acceptance of women in these non-traditional roles. Even on the questions that did not show a statistically significant difference at the .05 level in response, the values at Sam Houston were generally higher than those at Reagan, indicating some change in response

at Sam Houston on nearly all items. It was interesting to note that the girls at Reagan did not maintain the same feelings they had in these areas, but rather moved in the direction of becoming even more traditional. It would have been very interesting to know if this movement was natural in girls of this age or if there was some other influence at Reagan during the year.

School Personnel

In order to evaluate the Sam Houston faculty's attitude toward the project, a survey was developed and administered early in the fall. (See Appendix B.) The staff made a very brief presentation to the faculty at an early faculty meeting. The purpose of the presentation was to familiarize the entire faculty with the goals and activities of Project EVE, show All About EVE, administer the survey, and answer any questions the faculty might have concerning EVE.

On the designated date, the project staff made their presentation to the faculty. The meeting turned out to be a working session and was not a very good forum for the project. At the same time the project staff was to make their presentation, the counselors were having the teachers complete student scheduling forms. It was literally impossible for anyone to do both simultaneously. Having no other options, project staff did not explain the details of the project but did ask the faculty at their earliest convenience to complete the survey that had been passed out to them and, if possible, to watch the slide presentation as they completed the forms for the counselors.

Although those seated close to the screen did watch All About EVE, most did not. As a result, the success of the presentation was questionable. However, it did appear that more faculty members were able to recognize the

project staff and associate them with a special program at Sam Houston. For two weeks after this faculty meeting, project staff attempted to have faculty members complete and return the EVE survey. Of the 135 professional staff at Sam Houston, 70 (52 percent) completed and returned the survey.

The project staff's main contact with Sam Houston teachers was through informal meetings. The project staff was able to meet informally in the halls, the main office, the teachers' lounge, the cafeteria, the counselors office, and countless other locations with numerous faculty members. These informal meetings over coffee or a coke were very important. They enabled the project staff to develop a rapport with the rest of the faculty. By mid-term, they were no longer seen as an alien group within the building. Everything EVE did was extremely visible, open, and beneficial to the entire student body, if possible. Nothing was ever kept secret from the faculty: all activities and programs were publicized well in advance and notices were constantly written on the main office black board. These informal meetings gave the project staff the opportunity to answer any questions the faculty had concerning the project goals or activities, as well as questions that pertained to recent events on the University of Houston campus. In several instances, project staff were able to assist academic teachers and counselors in locating materials and resources that they were having difficulty finding. The project staff was also able to help the vocational teachers, putting them in contact with personnel departments that were looking for trained students, helping them organize their recruitment programs, arranging for potential students to take a necessary vocational inventory test at the Northwest Testing Center, and generally assisting them in any way possible. These informal meetings plus

the very flattering publicity that the high school received as a result of the project were very effective in changing attitudes toward girls in traditionally male areas. This enabled the project staff to build a trust between themselves and the faculty that generally put the project activities above suspicion.

In order to determine what, if any, effect Project EVE had had on the Sam Houston faculty and staff, the survey was readministered in April through the school mail. Forty-seven persons completed the post-test. This represented 35 percent of the Sam Houston faculty and staff. The post-tests were tabulated and analyzed in the same manner as the pre-tests.

Generally, the pre-test showed a willingness of school personnel to accept women in non-traditional roles, though some academic teachers still felt women should remain in the traditional female areas. Most respondents indicated that they would refer their students to vocational education programs and that vocational students were slightly better prepared for jobs upon graduation. When asked about their aspirations for their own children, though, most indicated that they should go on to college and a professional career. It was interesting to note that this response was generally the same for both daughter and son. On the post-test, the respondents' attitudes toward vocational education in general had not changed significantly. However, the results did indicate a significant increase in the number of respondents who were willing to accept women in non-traditional roles. Further, there was a marked increase in the number of respondents who felt that vocational students were better prepared for jobs after high school graduation than non-vocational students. Overall, there was also a 7 percent decrease in the faculty who would discourage their female

students from taking a traditionally male vocational course. This decrease was greatest (11 percent) among academic teachers.

It is interesting to note that although the faculty's attitude toward non-traditional vocational training for women was greatly improved, they no longer felt as strongly that they had enough information about vocational education and the job market to advise their students.

The project staff also participated in several presentations to educators other than those at Sam Houston. One of these presentations was to a group of 65 secondary and post-secondary counselors from HISD and surrounding school and community college districts. The workshop, conducted by the Houston Community College, was designed to discuss new techniques in career guidance. After the presentation, workshop participants were asked to complete a questionnaire similar to that given to the faculty at Sam Houston. Fifty-two counselors completed the survey. The results of the survey indicated that the vast majority of counselors felt that society places greater emphasis on academics than on learning a job skill and that women should be allowed to enter traditionally male careers and job training. Interestingly enough, most secondary level respondents did not feel they had enough information about vocational education or the job market to advise students. Only 50 percent of the post-secondary respondents agreed with the statement, "Girls need to prepare themselves for a career."

In November, representatives from the Texas Education Agency and the Department of Health, Education, and Welfare conducted a workshop for the Harris County Department of Education. The Superintendents of all Harris County school districts and selected members of their staffs were invited to attend. The purpose of the workshop was to clarify the intent of Title IX and its implementation as it pertains to public schools. The staff was

asked by TEA's Office of Technical Assistance to make a presentation at this workshop. The purpose of the EVE presentation was to give those educators present a concrete example of a high school level program geared to attract girls into non-traditional vocational programs. The project was fairly well received by those 30 persons present. Several people were quite interested in the activities and requested further information.

One of the persons attending this meeting was the superintendent of a suburban school district. He was extremely interested in the project and asked the staff to make a presentation to a group of counselors and teachers in that district. On January 30, 1975, the project staff made a presentation to 35 counselors and vocational teachers as requested. The project goals and objectives were explained to the group, the activities were reviewed, the slide presentation was shown, a sample of EVE materials was discussed, and questions were posed and answered. The group was extremely interested in the implementation and results of the project. The project staff also made a presentation at the Texas Southern University Career Guidance Institute. This week-long summer institute was well attended by over 200 teachers and counselors from the Houston area.

Parents

In order to assess parental attitudes toward vocational education in general and women in traditionally male vocational education, the project staff developed a questionnaire to be administered to parents within a geographically defined area around Sam Houston High School. The firm of Higginbotham Associates, Inc., was hired to conduct this survey. The original questionnaire was adapted to be used as a telephone survey. (See Appendix C) The questionnaire was administered in May, 1975, to a sample

of 400 adults living in the Sam Houston area. One-half of the sample was drawn from random households in the area, and one-half was drawn from a list of parents who had daughters entering Sam Houston in the fall, 1975.

The overall results of the survey strongly reflected attitudes very similar to those found in the student testing. The vast majority of respondents felt that:

> young women should seek additional education/training after high school;
>
> young women should be encouraged to take job-training courses while in high school;
>
> young women should be allowed to pursue any career they desire; and
>
> women should receive equal pay for equal work.

Given the above attitudes, it was interesting to note that, when brought to the personal level, most respondents would not encourage their daughters to look into careers that have been all male in the past.

Roughly one-half of the respondents discussed career plans with their daughters. Although most respondents knew that job training was available in high school, many did not really know what specific vocational courses were offered at Sam Houston. Less than 20 percent of the respondents knew that girls were allowed to take courses such as plumbing and welding.

The results of the survey confirmed the project staff's feeling that parents needed to be informed about non-traditional job training opportunities available to their daughters in high school.

The activities to be included in such an information program were appearances before the Sam Houston Parent Teacher Organization and participation in the annual Sam Houston Open House plus the general publicity about the project. These activities were designed to inform parents as well as students

and teachers of the many opportunities now open to women and to encourage them to think of such careers for themselves, their daughters and/or their female students.

On September 7, 1975, the project staff met with the Executive Board of the Sam Houston Parent Teacher Organization. At this meeting, the staff explained the project and requested an opportunity to appear before the entire membership of the organization. The Board members were extremely receptive, and October 9th was set as the date for the presentation. At this meeting, project staff showed All About EVE and explained the project to the approximately 50 parents who were present. All but three members present were female. The staff stayed for a luncheon after the meeting to answer individual questions. The response from the parents was very positive.

Sam Houston High School held its annual open house on September 30, 1975. About 200 persons attended this open house, and the Superintendent of HISD was the keynote speaker. During the Open House, Project EVE had a display in the cafeteria along with several of the student clubs. Rather than showing the entire slide presentation, the project staff used only slides on women training for and working in non-traditional careers with music in the background. Approximately 75-100 parents stopped to look at the slides and ask about the project.

The response from the parents at the Open House was very positive. Many students as well as parents stopped at the display to watch the pictures and to inquire about the availability of such job training at Sam Houston. All were informed that such training was available at Sam Houston and was open to all students. Not one parent registered a negative comment about the propriety of such training for young women. Several of the mothers expressed a desire to have been able to pursue such training when they were younger.

The overall parental response to project goals and activities has been very interesting. At the Open House, the parents of Sam Houston students seemed to be very much in favor of job training in all areas for females. In the survey, though, they were not very enthusiastic about non-traditional job training for their own daughters. However, parental attitudes did not appear to have that great an impact on a student's choice of vocational program. The prevailing attitude seemed to be that as long as the student was in school all day, it didn't matter what he or she was taking. Of the thousands of students who took part in EVE presentations, only two parents called the HISD central office to find out exactly what kind of program EVE was, and neither of these two parents objected to the program once it was explained to them in detail. The staff also did not find a single girl at Sam Houston whose parents objected to her taking one of the traditionally male vocational classes.

Community

In order to reach the entire Sam Houston community with information concerning vocational training in non-traditional careers for women, the project staff identified fifty major civic and religious community groups in this geographic area. In June, letters were mailed to all of these groups explaining Project EVE and offering to make a presentation to the membership. Each letter was followed up by a telephone call from the project staff in August. Most of these organizations were either not interested in such a presentation or were already booked for the year. The project staff did make presentations to the North Side Lions Club and the Greensgate Lions Club. Each meeting was attended by about 35 men. After lunch, the project staff was introduced. They then gave a brief history

and summary of Project EVE followed by the slide presentation. At both meetings, the discussions were very lively. Some of the men were hesitant at first to express their feelings about women training for jobs in traditionally all-male fields. Many felt that woman's place was in the home, and that if she was going to work, she should work in a traditionally female job. It was never necessary for the project staff to argue the issue--there was always at least one man in the audience who owned or operated a machine shop or something similar, and it was his feelings that he didn't care if the person was male or female as long as he or she was trained. By the end of each meeting, this person had converted several other men to his way of thinking and had left the others to ponder their attitudes toward women in non-traditional jobs.

In early September, the project staff was contacted by Double C Productions to participate in what was to be a huge career fair, the Look of Knowledge, to be held in the Astrohall in mid-October. The project was offered a booth free of charge to maintain during the four-day exhibit. The staff felt that if the entire exhibit was to attract area students, it would be an excellent opportunity to expose all in attendance, exhibitors as well as students and parents, to the opportunities now open to women through vocational education. The project staff designed and set up the booth in such a manner as to be the most attractive in the whole hall. Instead of the usual faded draping, the tables within the EVE booth were draped in red vinyl. A four-foot by six-foot red, white and black vinyl sign with the EVE logo hung at the rear of the booth. A bushel of red apples with a wooden sign in it displayed the times that the slide presentation would be shown. All About EVE and an alternate program of slides of women working

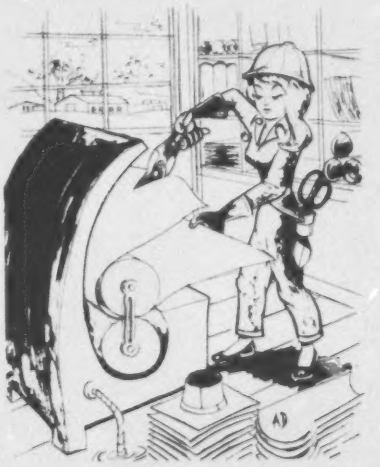
at non-traditional jobs with background music were used. Brochures explaining vocational opportunities for women were displayed, and a staff person was always present to answer questions. The exhibit attracted approximately 700 area high school students.

The EVE booth was a favorite booth of those attending the exhibit. The booth was brighter than any other booth, the music, though low in volume, was contemporary, and the subject matter seemed more interesting than most. Local television covered the Look of Knowledge including a wide-angle shot of the EVE booth.

RELATIONSHIP WITH INDUSTRY AND UNIONS

One of the questions raised very early in the project, by both the staff and the advisory committee, concerned industry's commitment to the goals of the project. There was great concern by the staff as to whether or not industry was really hiring women into the traditionally male skilled/craft jobs. All agreed that the worst possible outcome of the project would be trained females who could not find jobs. There was also concern that high school girls, teachers, counselors and parents would be skeptical about the availability of job openings for women in these areas. Therefore, techniques had to be developed to convey this commitment, if it did exist, to the girls.

When the advisory committee was formed, two representatives of industry and one of organized labor were included. While these persons could not speak for all industry and labor, they could give some insight into industry's views on women in non-traditional skilled/craft jobs and could suggest means to obtain and utilize industry's cooperation. The members chosen in these roles served this function very well and saved the project staff from having to knock on industry's door unannounced.



At the first advisory committee meeting, different means of obtaining industry's cooperation and input were discussed. It was decided that,

because of sensitivity to the issue of equal employment, the approach should be to meet with individual companies on a one-to-one basis. Any discussion of a survey was quickly ruled out. All agreed that it would be best to obtain the full support and cooperation of a smaller number of companies--hopefully companies representative of the major industries in the Houston/Gulf Coast area.

The two industry representatives on the advisory committee agreed that, in their experience, industry was committed both to vocational education and to hiring women in skilled/craft jobs. They pointed out the shortage of skilled labor in this area and said that industry was now looking to women as a way to remedy some of this shortage. They stated that, because there are so few women trained in these areas, many companies have started training programs specifically for women. Companies are also spending much time and money working with the men in the plants to counter any prejudice against the women being hired. Specific training materials have been developed for line foremen on supervising minorities and women. It was thought that these materials might serve as excellent resource materials for the project.

Immediately after the first advisory committee meeting, the staff began meeting with industry representatives to get their input on the project. The purposes of these initial meetings were:

- to get input from industry on the goals and objectives of the project;
- to find out first hand what opportunities really exist for women in the Houston/Gulf Coast area in non-traditional skilled/craft jobs;
- to discuss possible cooperation between industry and the project; i.e., industry participation in career days, field trips, etc.; and
- to get pictures from industry of women actually working in skilled/craft jobs who could serve as role models to high school girls.

A list of potential persons for these meetings was compiled from all possible resources. The first meetings were with the two companies represented on the advisory committee. From there, each person introduced the project to other employers in the area. This method was very successful. In almost every case, the project was able to contact someone who had been previously told about the project by a fellow employer. The project encountered almost no suspicion from employers, and the method of making contacts was probably the reason. In only very few cases did the project approach a company without a prior introduction.

By utilizing all possible contacts, a list of 25 companies representative of the major industries in the Houston/Gulf Coast area was developed. To this list was added five apprenticeship programs in the building trades and two branches of the armed forces. The industrial groups and number of companies contacted included:

major oil companies	- 5
oil field service companies	- 4
ship building companies	- 1
construction companies	- 2
public utilities	- 4
retail appliance/auto service centers	- 3
electronic component manufacturers	- 3
steel companies	- 2
television station	- 1

Most of the meetings with the companies and unions were individual personal meetings. In a few cases, where appropriate, the project was discussed over the telephone. Every person contacted reacted very favorably to the project. Nearly all employers pointed out the shortage of skilled workers in the Houston/Gulf Coast area. Because of this shortage, industry seems to support any effort to increase the labor supply. Particularly, there is an acute shortage of females with even the least amount of mechanical knowledge. At least verbally, all the companies visited professed a

great desire to hire women into the non-traditional areas. Most already had a few women on the job or women hired for future training programs. Those employers who had had experience with women were very positive about women in these jobs. They had found women to be very stable employees who were very capable of performing their assigned tasks.

The companies were not only very positive about women in these areas, but also about vocational education in general. They seemed to feel very strongly the need for good vocational programs at the high school level, and some were critical of the vocational programs in the local school districts. Many saw Project EVE as an effort to both improve the quality of vocational training in general and to get more women trained in these areas--both being goals industry supports. Almost without exception, the companies agreed to cooperate with the project in any way possible. The project's most immediate concern was in finding women in the non-traditional areas who could be used in the slide presentation. There was concern that all of the women in these areas would be older women, not suitable role models for high school girls today. As was explained earlier, this was not the case, and the staff found many attractive young girls in these jobs who now appear in the slide presentation.

Besides allowing the project to take pictures or supplying pictures, most of the companies left the door open for further cooperation. They agreed to serve as speakers, allow their employees to be speakers, guide field trips, etc., and were very interested in interviewing future graduates. While project constraints did not allow the project to make use of most of the offers, they did reinforce the belief that schools are ignoring a very great resource by not taking more advantage of industry cooperation.

In the few cases where the project did follow through on an offer, the companies were as cooperative in reality as they had been verbally. Many of the companies continue to follow up on project activities and offer support.

Since many of the company representatives had asked to see the completed slide presentation, a formal showing was set up in the fall. Invitations were sent to all of the persons who had been contacted earlier. The program was merely a showing of the slide presentation and an up-date on the progress of the project. Invitations went out to 44 persons; 23 of them or their representatives actually attended. The response to the slide presentation was excellent. Every comment was very positive--that it truthfully portrayed opportunities for women in these areas and should serve to encourage high school girls into these areas. Several of the companies at this meeting suggested that the slide presentation would also serve as an excellent employee training devise--to show supervisors the number of different jobs women are now doing. The group also reiterated the earlier cooperation that had been offered.

There were several other opportunities for various representatives of industry to see the slide presentation. On several occasions, special showings were set up for persons from out of town. The presentation was also shown to the Houston Chamber of Commerce Education Subcommittee. This meeting was attended by about 50 persons. While a few of these persons had already seen the slide presentation, most had not. In fact, most were from companies that had not been contacted earlier. This meeting, therefore, served to broaden the base of industry support for the project. The slide presentation was also shown to the Houston Chapter of the Apprenticeship

and Training Association of Texas. This meeting was attended by about 20 persons involved in union apprenticeship programs in Houston. A few of these persons had been contacted earlier and knew of the project, but most were unfamiliar with it. Those who had pictures in the slide presentation seemed very pleased with the way they had been handled. Discussions with this group were very helpful. Several expressed real reservations about women in these apprenticeship programs, and the ensuing discussion both with the project staff and among the directors themselves was very helpful in clearing up some misconceptions. The directors who had dealt with women were very positive about them. It was those persons who had never had a female apprentice who were concerned. By the end of the meeting, the project seemed to have the full support of all in attendance. Most saw the greatest contribution of such a project as getting factual information to the girls before they signed up for apprenticeship programs. This, they hoped, would cut down on the current practice of signing up and then finding out what is involved. The result of this lack of knowledge about apprenticeship is that most girls, and many boys, drop out of the program before completing training.

As was discussed earlier, industry and union representatives were used in two of the high school programs. As expected, the employee herself was a much better resource person than the employer or supervisor. However, the companies contacted were very cooperative and employees were allowed to participate in programs during working hours with no loss of pay. Handled carefully, this could be a very effective way to recruit girls into vocational programs. The potential problem would be in trying to use the same employee in every school. However, there appear to be enough women in these different jobs to make as many presentations as would be needed.

The overall result of all the activities and discussions with industry and union representatives was a belief on the part of the project staff that there is a real commitment to hiring women in the non-traditional skilled/craft jobs in the Houston area. While persons from other parts of the country continue to be skeptical of this commitment, the staff of Project EVE firmly believe that it exists. If the schools will just graduate females trained in non-traditonal areas, they will find good jobs in the Houston/Gulf Coast area. Of course, much of this situation is caused by the very healthy economy that currently exists. However, all indicators are that this economy should continue, and the demand for skilled workers will only grow. This should give even more impetus to efforts to get students of both sexes interested in skilled/craft careers. Further, experience confirms that industry is a great resource that the classroom teacher is not utilizing. While there are many representatives of industry on advisory committees, etc., they are not in position to deal with the classroom teacher and the student. Industry has indicated a willingness to serve at this level, and it would probably be a good experience for both sides. Much of the criticism by industry about what takes place in the classroom is based on hearsay as is much of what teachers say about industry. A real exchange on the person-to-person level would do much to enhance the quality of vocational education in the schools.

SUMMARY AND RECOMMENDATIONS

The changing role of women in the labor force has brought about the need for many changes in the educational system. In the past, schools could content themselves with preparing men for the role of wage earner and women for the role of homemaker; this is no longer the case. In response to the greater movement of women into the paid work force, schools must now prepare both females and males for roles as wage earners. One area of the educational system that has been particularly inequitable in its treatment of males and females has been vocational education. Girls in vocational programs have generally been confined to areas that either do not prepare them for employment or prepare them only for low paying, dead end jobs. Many educators have become increasingly aware of this problem and have been seeking solutions to it.

As a response to this problem within the State of Texas, the Center for Human Resources of the University of Houston was funded

by the Division of Occupational Research and Development of the Texas Education Agency to develop a model program that would eliminate patterns of past discrimination by recruiting females into traditionally male technical and industrial vocational programs. Project activities began on February 1, 1975. Before funding, the Houston Independent School District agreed to cooperate with the project and designated Sam Houston High School as the demonstration school for developing and testing project activities.

Besides the overall goal of the project--to develop a model program to recruit females into vocational programs that had traditionally been dominated by males and to maintain the increased female enrollment--other secondary objectives were also set out. These included providing information to all the female students at the demonstration school about the educational and career opportunities available to them through vocational education; recruiting females into traditionally male vocational classes; providing the necessary support services to these females enrolled in the traditionally male vocational courses; informing teachers, parents, and the community in general about the availability of good jobs for women in fields traditionally dominated by men and the ability of women to perform in these jobs; and improving the image of vocational education so that students, parents, and teachers would see it as a viable alternative to traditional academic courses.

Originally the project was called Women in Vocational Education. However, soon after funding, an art student at Sam Houston developed a logo for the project which used the letters EVE, standing for Equal Vocational Education. From that time forward, the project was known as Project EVE.

All of the recruitment activities were developed and tested at Sam Houston High School. In order to evaluate the effectiveness of the project

activities, a student questionnaire was developed for use before and after activities took place. The questionnaire was administered to potential Sam Houston female students while they were in junior high school during the spring, 1975. At the same time, a control school--Reagan--was selected, and the same questionnaire was given at the junior high schools that fed students into Reagan. The results of this pre-test gave the staff an insight into the knowledge and attitudes of ninth grade girls of all ethnic groups. Areas covered by the questionnaire included attitudes toward women working, toward women in traditionally male jobs, toward vocational education, and toward non-traditional vocational courses for girls. Also covered was information about women in the labor market today and about the girls' future plans. One of the major findings of this initial survey was the lack of information that the girls had about the labor market and their own futures in it. This convinced the staff that the proposed activities had to include this information.

Six girls were recruited into auto mechanics, radio and tv, and plumbing for the 1975-76 school year at Sam Houston. Project staff kept close contact with these girls and with their teachers throughout the school year. Besides classroom visitations, regular weekly meetings were held with the students. The purpose of this close communication was to monitor the progress of the girls and to provide a mechanism for solving any problems that might arise.

During the 1975-76 school year, the staff developed a formalized recruitment program which could be adapted by other schools and school districts. This program was to be a self-contained classroom presentation. The program developed included a booklet of student materials containing five different activities. The activities were:

a game, "Does the Glass Slipper Fit?"

a slide/tape presentation, All About EVE;

three case studies, "Was This Woman Prepared for Her Future?"

"What Is Your Future Work-Life Expectancy?"

and a discussion of some labor force data from the Women's Bureau of the U. S. Department of Labor.

All the students received the booklet which was entitled, What's In Your Future...Will You Plan It Or Just Let It Happen?

The activities were tested on 228 sophomore girls in seven different physical education classes at Sam Houston. After each class, the girls were asked to fill out an evaluation form on the material. Overall, the evaluations were very positive. The students definitely absorbed the information presented to them and also seemed to have enjoyed the class period. After this very positive evaluation from the students, the staff approached all the HISD Area Superintendents about taking the materials into other high schools. The Superintendents were very receptive, and programs were scheduled in nine other HISD high schools. Most of the presentations were conducted along the same format as the presentations at Sam Houston, but two were large auditorium programs. The auditorium programs used speakers--a female student from Sam Houston, a female employed in a non-traditional job, a representative of the union apprenticeship programs and the vocational counselor--as well as All About EVE. Nearly 2,500 high school girls attended these different presentations.

While the materials were developed for high school girls, the staff and HISD administrators were anxious to try them out at the junior high level and also with mixed groups of boys and girls. Consequently, additional programs were conducted at the three junior highs feeding into Sam

Houston. These included four ninth grade girls' physical education classes, four ninth grade English classes (boys and girls), and seven Occupational Orientation classes (seventh and eighth grade boys and girls). Nearly 400 students were involved in these presentations. The materials used were not modified for the junior high students, except that the game "Does the Glass Slipper Fit?" was omitted when there were boys in the class. All of the junior high presentations were very successful. The material seemed as suited to this age group as to high school students. The boys were also very interested in the material, and the discussion of appropriate jobs for women between the boys and girls was lively. The staff was very pleased to find that, with only minor modifications, the material was as effective with a mixed class of 25 seventh graders as with a group of 500 female high school students.

Besides the classroom presentations, there were many other activities that took place at Sam Houston. These included continuous meetings with teachers, administrators, and students. The project participated in a PTO meeting and the annual Open House. The staff helped develop and organize a Career Fair that included all the vocational programs. The staff developed brochures, bulletin boards, library displays, etc., to publicize project goals within the school. The staff made presentations to several local community groups. Many of these activities were in response to the findings of the community and teacher surveys administered by the project.

In addition to these activities, the staff made use of community-wide publicity to change attitudes toward women in non-traditional careers and training. This publicity campaign was kicked off by a press conference held at the school and resulted in newspaper articles, radio interviews, and television appearances by both the staff and the female students. The

television stations also ran a public service announcement encouraging girls to enroll in non-traditional vocational training programs.

Another important activity of the project involved getting the support of local industry and unions--the persons who would be employing and training these girls after high school graduation. Much time was spent meeting industry and labor representatives, explaining the goals and objectives of the project to them and eliciting their support. This effort was very successful. Throughout the project, industry has supported all activities and has offered much assistance. All About EVE contains many pictures of local women working in non-traditional jobs which have served to supply high school girls with role models that they can relate to.

All of the activities of Project EVE have been extremely successful. At Sam Houston High School, two girls graduated with skills in plumbing and auto mechanics. Both are planning careers in training related jobs. Two additional girls will continue their second year of training next year in plumbing and radio and tv. In addition, 13 girls have signed up for auto mechanics, air conditioning, metals, radio and tv, and plumbing for next year. This means that every traditionally male vocational class at Sam Houston will have females in it next year. At the same time, the post-test given to the girls at Sam Houston in the spring showed a greater awareness of opportunities in non-traditional vocational education and in skilled/craft jobs. The responses also indicated more acceptance by the girls of women in these non-traditional roles. Even on questions that did not show a statistically significant difference at the level used, the values at Sam Houston were generally higher than at the control school, showing some change in response at Sam Houston on nearly all items. At the same time, the responses at Reagan--the control school which was kept

isolated from all project activities--showed the girls had become even more traditional in their attitudes toward women's roles and appropriate careers for women.

Female enrollment in non-traditional vocational programs increased at all nine of the high schools where EVE presentations were made. Total female enrollment in these programs increased from 33 girls in 1975-76 to 72 for next year. The counselors and teachers at each school attributed this increase to the Project EVE presentations.

Because of the success of Project EVE, the staff feels that the materials developed would be beneficial to all female students throughout the State. This year these materials have made a significant difference in the girls' knowledge and attitudes about non-traditional training and jobs and have made them more aware of their own futures in the work force. The classroom materials are being expanded into a manual for teachers or counselors who wish to implement the project model. This manual will contain all the student materials plus the additional information needed by the person making the presentation. It will also contain some specific suggestions and guidelines for using the material. A very important part of the classroom presentation was the slide presentation, All About EVE. This slide presentation is now available on 16mm film. This film is the only film known to the staff which accurately depicts women in non-traditional skilled/craft jobs in a manner which is appealing to today's high school and junior high school female. This film should, therefore, be shown to every female in every school in the State. While the film is even more effective when combined with the other classroom activities, it can stand on its own. If there is some reason why the entire classroom presentation cannot be implemented immediately, at least all girls should have the benefit of seeing All About EVE.

During the development of the project model, the staff chose not to select one area of the curriculum for the materials, but rather made them flexible so that each school could implement them wherever appropriate. This will mean that there will be many adaptations of the original material. In order to facilitate this process, there should be workshops and other technical assistance for school personnel throughout the State. With the manual, the film and some technical assistance, every school and school district should be able to duplicate the successes at Sam Houston and in the Houston Independent School District.

During the course of the project, the staff looked at many brochures, articles, news releases, publicity, films, displays, etc., concerning vocational education programs. Almost without fail, any program that could be classified as "traditionally male" was represented by only male students, and any "traditionally female" program was represented by only females. When asked why, the persons responsible for putting out such material often responded that either they did not even think about it or there were no pictures available of girls/boys in that particular area. The staff has become convinced that these pictures are very important. Very few girls will sign up for a program if the descriptive brochure shows only male students and male teachers. The staff, therefore, recommends that every vocational program in the State immediately look at all brochures, etc. to see if they do truly depict both sexes in all areas. If they don't, new ones should be developed immediately. All exhibits, publicity, news articles, brochures, etc., that relate to any training or career should show both males and females in every area. For the schools that do not currently have any pictures of girls in the skilled/craft areas because there are currently no girls in these areas, such pictures are available from other

sources. The staff would not recommend using models unless absolutely necessary. Even the untrained eye can usually spot the girl looking quizzically at the car and pretending to adjust the carburetor. Rather, pictures can be obtained from industry, the newspapers, other schools, or from this project. Another possibility would be the use of drawings. Every school has at least one art student who could prepare some drawings of women working in non-traditional areas.

Other materials that need to be reviewed are those that appear in the counselors' offices. Most employers and universities today have developed recruiting materials which do depict women in non-traditional roles. Counselors should specifically request such material and not display anything else.

As has been discussed throughout this report, one of the best resources to the staff during this project has been local industry. Industry representatives have supported the project and have assisted in many ways. The staff feels that this could be a resource to every vocational teacher and counselor. Teachers and counselors should make every effort to get to know the employers in their community. These persons would probably be very pleased to have the chance to have some input into training programs and to communicate directly with the students. If there are any women in skilled/craft jobs in the area, they would make excellent speakers in the classroom. Students are much more likely to listen to an employer or an employee talking about career opportunities and actual work experiences than a teacher. If properly utilized, industry could be a valuable resource that would greatly enhance the quality of vocational training programs for both the girls and the boys.

During the course of the project activities, the staff encountered many women beyond high school age who were interested in the training presented in the project. Whenever there was any publicity about the project in the local media, the majority of the telephone calls following were from older women who were always disappointed that they were not included in project activities. These women generally had no skills and were desirous of more information about training for the high paying skilled jobs. These women were referred to the Houston Community College where technical industrial training is available. However, it was obvious to the staff that many women are not aware that community colleges offer vocational training in the skilled/craft areas and that these programs are open to them. If these women are to realize their full potential in the labor market, an active program must be developed to inform them of the post-secondary job training available to them in traditionally male vocational programs. In addition, many of these women need accurate career and labor market information to help them make specific employment decisions.

If schools in the State of Texas will adopt these recommendations, Texas can truly become the nation's leader in equal employment opportunity for women. A booming economy has effectively created endless opportunities in every area for workers of both sexes. Particularly in the skilled/craft areas, there continues to be a shortage of workers and especially female workers. This environment, supplemented by the activities developed in this project, can bring about true equal opportunity for women in the last bastion of male domination, the skilled/craft jobs. By meeting this challenge, Texas will have replaced the fragile glass slipper of sex stereotyped education with the more sturdy shoe of equal educational opportunities for all persons.

APPENDICES

APPENDIX A

PRE- AND POST-TEST FOR STUDENTS

DIRECTIONS:

> For the following statements, decide on the degree to which you agree or disagree with each statement and then mark that answer on the separate answer sheet. This should be how you personally feel about the statement, not how you think other people feel.

Possible responses:

A. I strongly disagree with this statement.
B. I disagree with this statement.
C. I have no feelings about this statement.
D. I agree with this statement.
E. I strongly agree with this statement.

1. Money is the only real reason for women working.
2. All females should be prepared to support themselves financially.
3. Auto mechanics is an appropriate career for females.
4. Women who have jobs are unhappy.
5. A woman can be a good mother while working full-time as a nurse.
6. Married women should hold jobs so they can be independent.
7. When planning for a career, a girl should consider technical and skilled jobs that have traditionally been for men only.
8. Full-time, outdoor jobs are unsuitable for girls.
9. Women's place is in the home.
10. A woman can be a good mother while working full-time as an auto mechanic.
11. Married women should only work when their income is necessary to support the family.
12. Most girls who take machine shop are unfeminine.
13. Generally, girls perform best at jobs where they are working with people.
14. Women are becoming too independent today.
15. Most men would marry a woman even though she works as a plumber.
16. Vocational courses are courses that train students for jobs when they graduate from high school. These courses are generally for girls who are dumb.
17. Girls should be encouraged to enroll in traditionally all-male vocational courses like air conditioning repair.
18. Most girls are physically strong enough to be welders.
19. Girls should be encouraged to work.
20. Most men dislike intelligent women.
21. Only girls who are having trouble with academic courses should enroll in radio repair.
22. Girls should learn a job skill while in high school.
23. Men are better bosses than women.
24. Being the only girl in a radio repair class would frighten me.
25. If I had to make a choice, I would choose a job that made me feel important rather than a job with a high salary.
26. Most boys would make fun of a girl who took welding.
27. Vocational classrooms are too dirty for girls.
28. An auto mechanics teacher would be harder on girls than on boys.
29. It takes as much intelligence to learn air conditioning repair as geometry.
30. Most girls would laugh at a girl who enrolled in plumbing.

Possible responses:

A. Yes, I agree.
B. No, I disagree.

31. The average male worker earns nearly twice as much as the average female worker.
32. Of women who work, most work for less than five years.
33. Currently, half of all women are working.
34. Women with college degrees earn as much money as men with college degrees.
35. Nine out of ten girls of today will work for money at some time during their lives.
36. It is illegal to pay women less than men for the same job.
37. Most women workers are not married.
38. Most women work because they need the money to help support their families.
39. In Houston, secretaries earn as much as electricians.
40. Women earn less than men earn because women are concentrated in low-paying, dead-end jobs.
41. Very few married women work.
42. It is illegal for employers to refuse to hire qualified women.
43. Today there are many job openings for women in skilled jobs such as plumbing and welding.
44. In high school, all job training courses are open to girls.
45. The average woman worker today is single and under 20.
46. Women earn less than men earn because women have less education.
47. Working women are taking jobs away from men.
48. More than one-third of all women workers are in clerical jobs like secretary, typist, etc.
49. Currently, there are more job openings for machinists than teachers.
50. A woman can have a career while raising a family.
51. There is increased juvenile delinquency in families where the mother works.
52. There are employment opportunities for women in jobs that are often considered men's work.
53. Women workers are absent from the job because of illness more than men.
54. Women can generally make more money in traditionally male occupations than in traditionally female occupations.
55. In high school, a girl can learn to be an auto mechanic.
56. Physically, women are capable of working as machinists.
57. Women can perform any job men can perform.
58. Women are smart enough to become engineers.
59. Women possess the finger coordination necessary for electronics work.

DIRECTIONS:

For the rest of the survey, write your answers or circle the appropriate letter on this sheet.

Note: Vocational courses include auto mechanics, air conditioning and refrigeration, machine shop, cosmetology, office, health professions, DE and other courses that train students for jobs.

60. Have you considered taking a vocational course in high school?

A. Yes
B. No (go to question 62)

61. If yes, with whom did you discuss this? (You may select more than one if necessary.)

A. parent
B. friend
C. counselor or teacher
D. project EVE staff
E. no one

62. Are you planning to take a vocational course in high school?

A. Yes
B. No (go to question 64)

63. If yes, in what field?_____

64. If no, why not?_____

65. Are you planning to graduate from high school?

A. Yes
B. No

66. What are your plans for education beyond high school?

A. junior college
B. four-year college or university
C. business or technical school
D. on-the-job training or apprenticeship
E. none

67. What are your plans for working after graduating or leaving high school?

A. begin working immediately
B. begin working after further education or training
C. do not plan to work
D. undecided, but I have given it quite a bit of thought
E. undecided, I haven't really thought too much about it yet

68. After leaving high school, do you plan to continue living with your parents?

A. No
B. Yes, until I complete my education
C. Yes, until I get married
D. Yes, until I get a full-time job

69. After leaving high school, do you expect to receive financial support from your family?

A. No, I will be expected to support myself
B. Yes, but only in case of an emergency
C. Yes, until I complete my education
D. Yes, until I can support myself
E. Yes, until I get married

70. Do you plan to get married at some time in your life?

A. Yes
B. No (go to question 74)

71. If you do plan to get married, when do you plan to get married?

A. during high school
B. following high school graduation
C. following further education or training
D. after working at least two years
E. undecided

72. If you do plan to marry, do you plan to have children?

A. Yes
B. No (go to question 74)

73. If you do plan to have children, what are your future working plans?

A. do not ever plan to work
B. quit work when I marry
C. work until I have children and quit permanently
D. quit work when I have children and resume work after they are old enough

74. If you do not plan to have children or do not plan to marry, what are your future working plans?

A. do not ever plan to work
B. work for a few years
C. work continuously

75. When you start work, what job would you like to have?

_____

76. How much do you think you will be able to earn when you get that job?

A. $ 3,500 per year
B. $ 5,000 per year
C. $ 7,500 per year
D. $10,000 per year
E. more than $10,000 per year

77. How much education will you need to get the job you desire?

A. less than high school graduation
B. high school graduation
C. high school graduation plus some further education
D. four years of college or more
E. don't know

78. Has your mother worked outside the home?

A. Yes
B. No

79. Is she working now?

A. Yes
B. No

80. What does (did) she do?_____

81. What is your father's occupation?_____

82. How many years of school did your father complete?

A. 0-8
B. some high school
C. high school graduate
D. college
E. don't know

83. How many years of school did your mother complete?

A. 0-8
B. some high school
C. high school graduate
D. college
E. don't know

84. Are you working now?

A. Yes
B. No

85. Do you plan to work while in high school?

A. Yes
B. No

APPENDIX B

SURVEY FOR SCHOOL PERSONNEL
SAM HOUSTON HIGH SCHOOL

Sex: ___M ___F

Position: ___Administrator
___Counselor
___Teacher, academic
___Teacher, vocational

Please circle the response that most closely reflects your feelings.

Possible responses:

Strongly Agree	Agree	No Opinion	Disagree	Strongly Disagree

1. Society places more emphasis on a college degree than on learning a skill.
2. High schools place more emphasis on academic curriculum than on vocational curriculum.
3. It is the role of a high school to prepare students for a career.
4. Placement activities should be a function of the high school.
5. Males should be given first preference when enrollment in technical school and industrial classes is limited.
6. There should be no restrictions on a woman's holding a job as a truck driver.
7. Women should be allowed to work in heavy industry.
8. If women are to work in heavy industry, there should be special restrictions on working hours and conditions.
9. Vocational students are better prepared for jobs after high school graduation than non-vocational students.
10. Girls today need to prepare themselves for a career.

Possible responses:

Yes	No

11. Would you discourage your daughter from becoming a welder?
12. Would you discourage your female students from taking machine shop?
13. Would you feel comfortable hiring a female plumber?
14. Do you feel you have enough information about vocational education to advise your students?
15. Do you feel you have enough information about the job market to advise your students?

Please write out your answers to:

I. If you had a son, what would you want him to do when he graduated from high school?

II. If you had a daughter, what would you want her to do when she graduated from high school?

III. How would you feel if your daughter wanted to be an auto mechanic?

APPENDIX C

TELEPHONE SURVEY FOR PARENTS AND COMMUNITY

1a. Do you have any children living at home?

1b. If yes, what is the sex and grade in school of each child living at home?

2a. If you have (had) a son, what do (would) you want your son to do when (if) he graduates from high school? (Do not read list. Record first choice.)

	Q2a First Choice	Q2b Other Choices
Get a job	1	1
Go to college	2	2
Attend technical school	3	3
Enter military service	4	4
Attend business school or private trade school	5	5
Enter union apprenticeship program	6	6
Go into business or trade by himself or with others	7	7
Get married	8	8
Other (specify)_____	0	
DK/NA	x	

2b. If your son chooses not to (answer to Q2a), what else would you like for him to do? (Record answer above.)

2c. Ask only if have a son. Have you ever discussed your son's future career plans with him? yes, no

3a. If you have (had) a daughter, what do (would) you want your daughter to do when (if) she graduates from high school? (Do not read list. Record first choice.)

(Same list as Question 2a.)

3b. If your daughter chooses not to (answer to Q3a), what else would you like for her to do? (Record answer above.)

3c. Ask only if have a daughter. Have you ever discussed your daughter/s future career plans with her? yes, no

4. Please give several examples of vocational education courses offered in high school.

5. Is it possible for a student to learn a skilled trade in high school? yes, no

6. In your opinion, is high school skill training sufficient preparation for a job? yes, no

7. Do you think students who learn a trade in high school get better jobs than students who do not? yes, no

8. Can a student who completes job training in high school go on to college? yes, no

9. Would you encourage your son to take job training courses in high school? yes, no

10. Would you encourage your daughter to take job training courses in high school? yes, no

11. Do you think that today there are many real opportunities for women in careers that have been traditionally male only? yes, no

12. How likely would you be to take your car to a garage that employs female mechanics? extremely likely, somewhat likely, not sure, not very likely, not at all likely

13. Do you think female mechanics should earn the same wages as male mechanics? yes, no

14. If you owned your own plumbing repair shop, how likely would you be to hire a female plumber? extremely likely, somewhat likely, not sure, not very likely, not at all likely

15. In your opinion, is heating and air conditioning repair an appropriate career for women? yes, no

16. Would you encourage your daughter to look into careers that have been all-male in the past, such as welding, plumbing, etc.? yes, no

17. How would you feel if your daughter wanted to be an auto mechanic?

18. Are job training courses taught at Sam Houston High School? yes, no

19. Are girls allowed to take courses such as plumbing at Sam Houston High School? yes, no

20a. Have you ever heard of Project EVE? yes, no

20b. If yes, what do you think is the purpose of Project EVE?

And now I have a few questions to ask for the purpose of classifying this data.

c-1. What is your age?
c-2. And what is your marital status?
c-3a. What was the last grade of school that you completed?
c-3b. And what was the last grade of school that your spouse completed?
c-4a. Are you the head of the household or the chief wage earner in your household? yes, no
c-4b. Who is the head of the household? male, female
c-5a. What is your job title?
c-5b. What is the job title of your spouse?
c-6. Finally, what is the approximate annual income for all members of your family?

Interviewer: Record sex of respondent: male, female

Race: White, Black, Latin, other, not sure